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AUGUST, 1940

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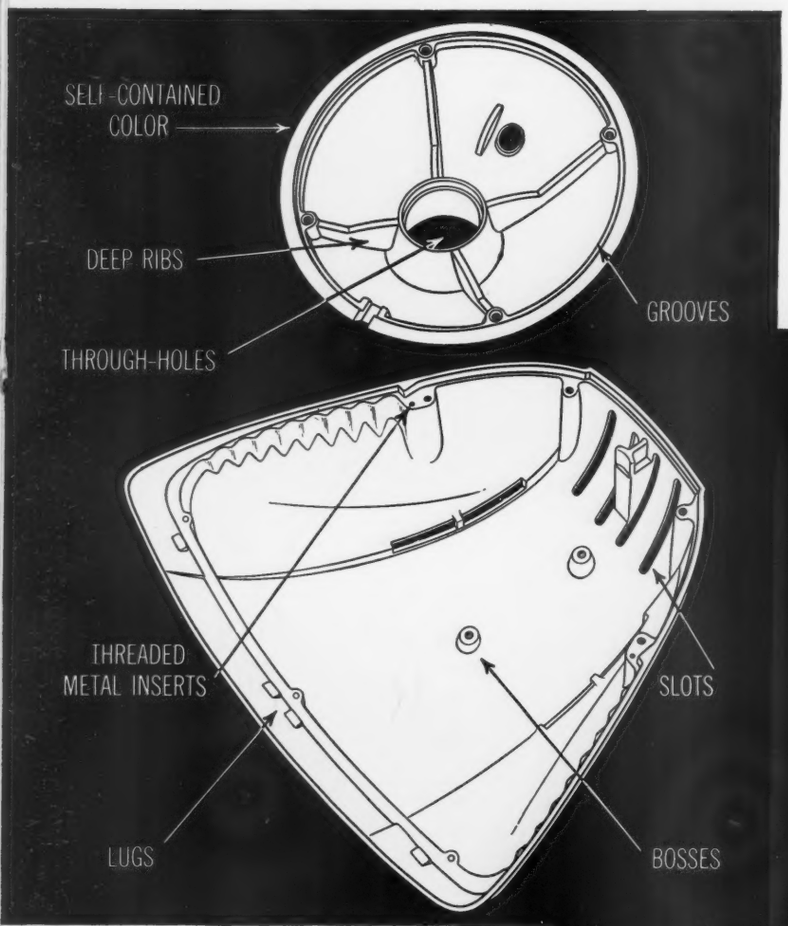
FACTORY

MANAGEMENT and MAINTENANCE

WHAT INDUSTRY CAN DO FOR AMERICA

POLAROID SIMPLIFIES PRODUCTION OF UNIQUE DESK LAMP WITH

these Cost-cutting Features Provided by Bakelite Plastics



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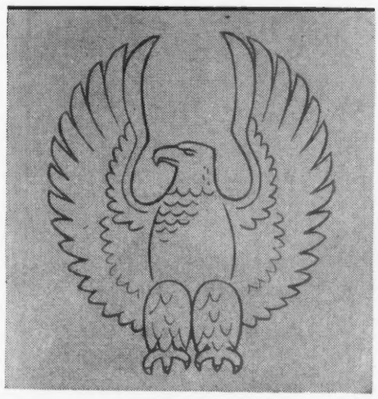

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FACTORY MANAGEMENT and MAINTENANCE

AUGUST, 1940

What Industry Can Do for America

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Why America Lives as Well as It Does Today

Why America Could Live Much Better

What Is Holding America Back

How America Can Go Ahead

How One City's Industry Is Helping America

How One Industrial Plant Is Helping America

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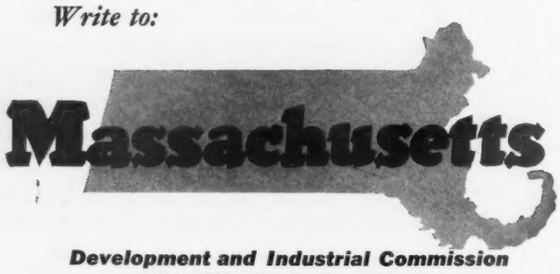

Development and Industrial Commission
State House, Boston, Mass.

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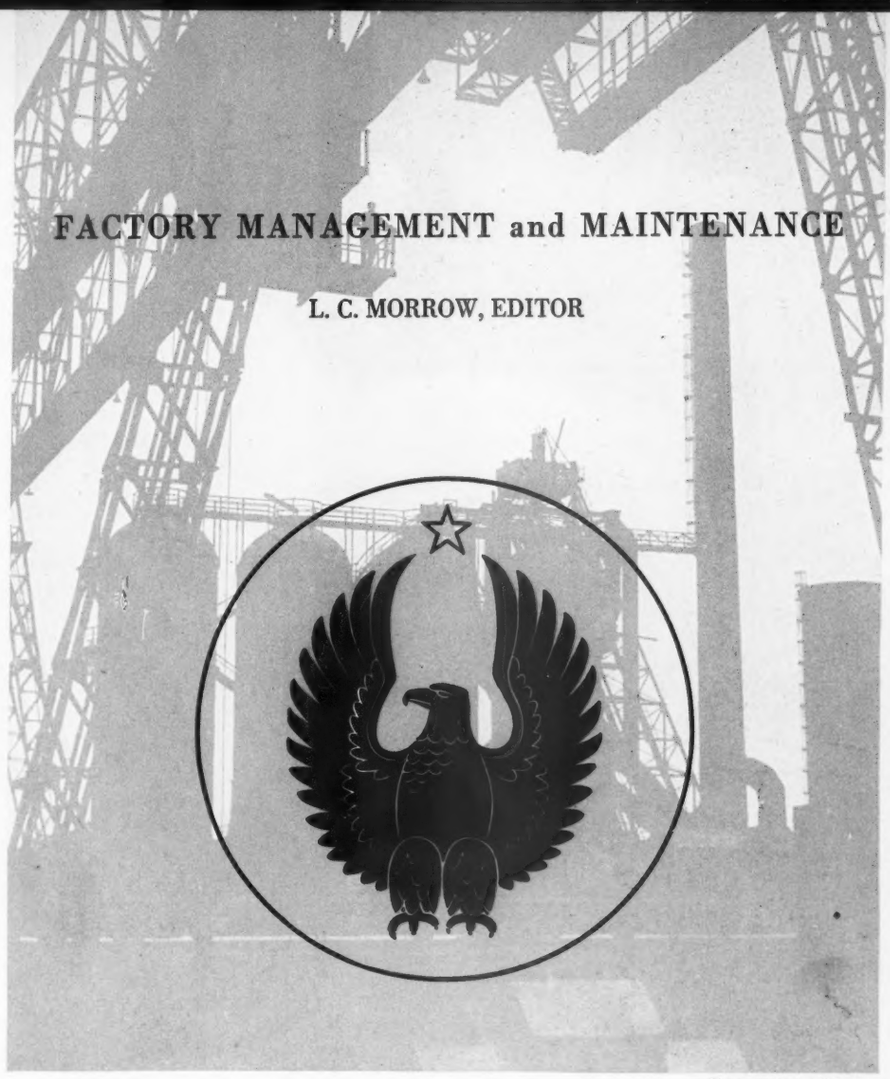
Massachusetts Has Attracted More New Firms {latest census} Than Any Other State East of the Rockies!
Send for this free book on why it is profitable to locate in Massachusetts. No obligation. We preserve strict confidence.



H. Armstrong Roberts

What industry can do for America

Industry today is face to face with an unprecedented challenge.

It has to create a better livelihood for the American people; and, at the same time, it has to produce the materials for a national defense which will insure national survival.

But these two tasks are really, at bottom, the same task. We cannot create a better livelihood for the American without an effective economic system; and, without an effective economic system, we cannot competently and sufficiently produce the materials for our national defense.

Today, as never before in our history, American industry must strive toward an effective American economic system in the name both of prosperity and of patriotism.

We who are familiar with industry know that *if it is given the right*

U. S. Army and Ewing Galloway

Today, as never before in our history, American industry must strive toward an effective American economic system in the name both of prosperity and of patriotism. While we concentrate on the defense of physical America, we must not forget that the defense of spiritual and economic America is equally important

conditions it can create goods and services almost illimitably for the American people and can provide them with a defense equipment that no foreign foe will ever be able to penetrate. We know that American industry can make America a land of universal well-being and also a land impregnable to foreign assault, *if it is given the right conditions.*

Ah, that "if!" The great immediate job of American industry is to knock that "if" down. Its great immediate job is to persuade the American people to give it the conditions under which it can really create and really produce and really serve. Those conditions do not exist. Why? Because most Americans are following economic delusions.

They think—many of them—that you can create "new purchasing power" by transferring a dollar from one man's pocket to another man's pocket. They think—many of them—that you can increase the wealth of the country by increasing the public debt of the country. They think —many of them—that you can earn more daily bread by doing less daily work. They think—many of them—that you can enlarge the national prosperity by setting aside great classes of able-bodied citizens to live on pensions without doing any work at all. They have lost touch with the fact that work, intelligent work, strenuous work, is the only known root of wealth for the nation and of economic happiness for the families within it.

The great immediate job of American industry is therefore a missionary job. It is to persuade the American people to turn from delusions to verities. American industry can do it. But let us not be content with saying that it *can* do it. Let us tell the total truth. American industry *must* do this missionary job—*or perish.*

The European totalitarian countries shriek this truth at us. The peoples of those countries were devastated with war, waste, inefficiency, unemployment. They did not thereupon turn to industry. They turned to government. They called in the government to bind industry in chains. Influenced by a combination of genuine suffering and of false argumentation, they introduced a governmental planned economy and they exterminated free enterprise.

That same process has now begun among us. We have genuine suffering among our industrial unemployed and among our agricultural migrants. We have false argumentation directed by powerful voices against all industry and all industrialists. We have government measures designed not to increase wealth but to share poverty. We have cunning governmental schemes for first crippling industry and for then blaming industry for not marching. We have propaganda day and night for making industry unpopular and for training the people to believe that government is their only savior.

Industry has to save this country. In order to save this country, it has to save itself. In order to save itself, it has to learn how to present its case humanly and appealingly and—above all—sincerely.

It has to begin by admitting—and claiming—that the American people have never yet had the prosperity to which they are entitled. Industry must quit trying to make out that "all was well" till the demagogues interfered. It was never all well. We have always had too much poverty. We have always had too much living at a low economic level. We have never had the universal decent economic well-being to which we are entitled by our extraordinary natural resources and by the extraordinary native capacity of our workers.

Let industry stop dwelling exclusively on its *record,* on its *past.* The American people are not content with a past, no matter how glorious. Let industry take the initiative away from government and point the way for the American people to a future greater and grander by far than any past they have ever known—and greater and grander than any government can ever contrive.

It is in that hope *and in that confidence* that we present the story told in these pages. It deals with things done, but it deals also with things still to do. It falls naturally into four parts:

1. **How Well America Lives Today.** A satisfying picture, if we contrast it with medieval times. And a satisfying picture, again, if we contrast it with what exists in foreign countries and particularly in the foreign countries in which the people's thinking is done for them by governmental officials. But not satisfying if we contrast it with the capabilities and ambitions of Americans. Americans are never satisfied. Thank God! Therefore:

2. **America Could Live Much Better.** American mines, American forests, American fields, American machines, American brain-power, American *soul*-power, yes, the American *spirit,* which is more important than brain and more important than material resources—if we would *use* all these things, and if we would *fuse* them, could we not live better, much better? Certainly. The figures prove it. We shall give the figures. But then we have to ask: If we *can* do it, why *don't* we? Therefore:

3. **Why America Is Not Going Ahead Faster.** Here we are very frank. Government has done things it ought not to have done. Labor has done things it ought not to have done. And industry? Yes, industry, too, has done things it ought not to have done. Let us face those things. Let us look them through. Let us not cover up. The first thing to do in a jam is to confess and come clean. And the next thing, the clergymen tell us, is a "purpose of amendment." Therefore:

4. How Industry, Labor, and Government Can Help America. Each can help. But—above all—they can help jointly. We cannot have economic *civil war* between American groups and also have American prosperity and American national military safety. We have to get together in a *free* national unity that will be stronger than any of the world's *enslaved* national unities.

Such is the story, in its four logical steps. It needs to be told by industrial people to all our people. It needs to be told to employees. It needs to be told to labor leaders. It needs to be told to farmers. It needs to be told to politicians. Everybody who truly believes in the mission of American industry must become today an educator. It is not enough for him simply to denounce "the enemies of industry." He must have enough knowledge, enough conviction, enough zeal, to try actually to convert them. That is the only way causes are saved.

Let us look at the problem in the light of the democratic liberty to which we are devoted. Our free fellow-citizens do not simply decide our politics. They also decide our economics. We are going to have whatever economic system the people want. We cannot stop them by talking about abstract "economic laws." We have to give them concrete economic facts drawn from the past and concrete economic policies and purposes aimed at the future. We have to give them economic *and human* ideals, visions, goals.

To that human objective these pages (even with all their statistics) are dedicated.

Keystone View

Wherever this symbol appears in the following pages it accompanies an interpretation of American economy in relation to defense needs. Adequate national defense does not justify deviation from the sound economics of free enterprise. In fact it emphasizes the necessity for a thorough understanding of the American economic system and strict adherence to its fundamental principles

How well America lives today

Just how well *does* America live today? In a way, it's like asking: How long is a piece of string? You cannot give the answer unless you measure the string with something.

The average American measures himself by "the Joneses." Is his house as big and as nice as theirs is, in the next lot? Is his car as new? Does his wife set as good a table as Mrs. Jones sets?

Well, the Joneses for the United States are the world's other leading countries. Let us test our living by theirs. Of course we'll not consider their living of today, under war conditions. That would be just like lording it over the Joneses after a fire or tornado had ruined their place. We'll consider how they lived before the war.

Not long ago the National Association of Manufacturers sent a representative to Europe. He inquired into wages and prices. Then he was able to make exact comparisons. For instance:

Take the average hourly wage of a factory worker in each country. Then take the price of a pound of bread in each country. And then ask the question:

How many pounds of bread can the average factory worker buy—in each country—with the money he earns in one hour of work? Here is the answer:

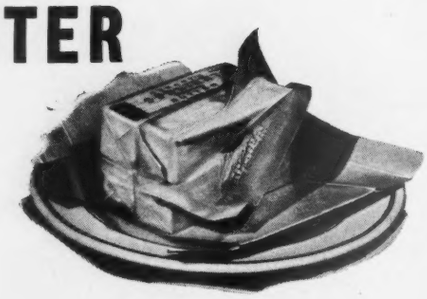
BREAD

One Hour of Work	*Pounds of Bread*
United States	7.5
Great Britain	5.2
France	5.0
Belgium	4.9
Italy	2.8
Germany	2.5
Russia	1.9

It would seem that wages must be pretty low or flour pretty high in those totalitarian countries, Italy, Germany, and Russia. They do not seem to hand out the "staff of life" anywhere nearly as generously as the "capitalistic" United States.

Perhaps, though, the dictators just happen to be short on flour. Let's see how they are on butter. How much butter to spread on his bread can the average factory worker get—in each country—with one hour's earnings? Answer:

BUTTER

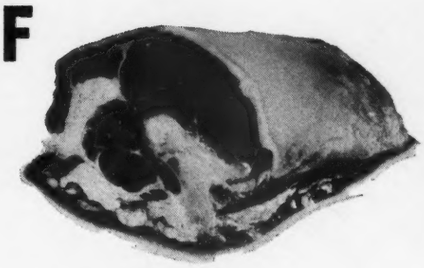


One Hour of Work	*Pounds of Butter*
United States	1.6
Great Britain	0.8
France	0.5
Germany	0.5
Belgium	0.4
Italy	0.3
Russia	0.2

This time Germany does better—a tiny bit better—than Belgium. But note: Again the United States is away out in front. And again Russia is a bad last.

But let's be fair. Life contains a lot of things besides bread and butter. Let's try beef. How much beef for an hour's earnings?

BEEF



One Hour of Work	*Pounds of Beef*
United States	2.1
Great Britain	1.4
Germany	0.9
France	0.8
Belgium	0.7
Italy	0.5
Russia	0.3

This time Germany climbs above Belgium and France; Great Britain is above Germany; the United States is above Great Britain; Italy and Russia are "also rans."

Will they do better in the next race? Let's make it on potatoes. (Germany is very strong on potatoes.) How much potato for one hour of time at the factory bench?

POTATOES

One Hour of Work	*Pounds of Potatoes*
United States	35.1
Germany	20.5
France	18.1
Belgium	17.2
Great Britain	13.8
Italy	9.2
Russia	7.3

Here Great Britain falls to fifth place; and Germany beats them all—except the United States. But the United States is still in front by lengths and lengths. And Italy and Russia are again tailing.

So let's try some tropical imported commodity. How do they run on coffee?

COFFEE

One Hour of Work	*Pounds of Coffee*
United States	2.6
France	0.6
Belgium	0.6
Great Britain	0.5
Germany	0.3
Italy	0.1
Russia	0.1

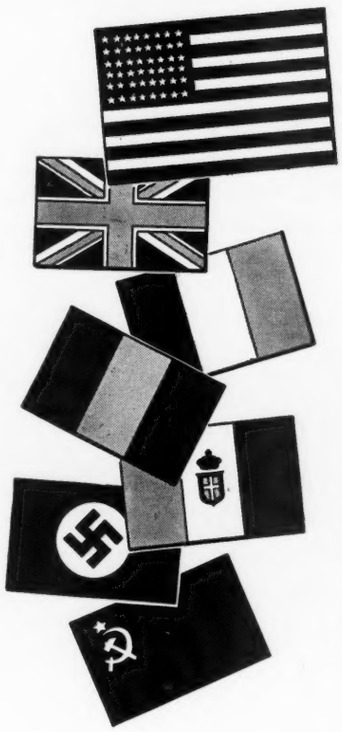
This one was really no contest at all. The American worker, for one hour's work, gets more than four times as much coffee as the French or Belgian worker, more than five times as much as the British worker, more than eight times as much as the German worker, and actually twenty-six times as much as the Italian or Russian worker.

Based on the average consumption of 100 American families, a family of two adults and three children will use four of these baskets of food per day

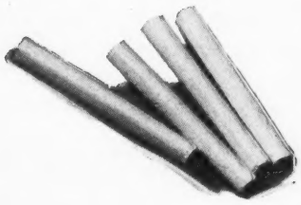
But let's stop these heats on individual foods. Let's have one grand composite heat on foods in general. Let's imagine a balanced basket of twenty-four foods in general use. This is the true complete food test. How will these countries take it? What showing will they make? Here they come:

One Hour of Work	*Baskets of Food*
United States	2.83
Great Britain	1.26
France	1.23
Belgium	1.11
Germany	1.02
Italy	0.65
Russia	0.40

Note the results. The four democracies are one, two, three, four. The three dictatorships are five, six, seven. (How Russia does stick to seventh place!) And the United States beats its fellow-democracies by an immense margin. The American worker, with the earnings of one hour, can buy more than twice as much food as the British or French or Belgian worker.



Of course, though, man does not live by food alone. He has to have some comforts. After he has eaten, perhaps he wants a smoke. How many cigarettes for an hour's work in these countries?



Hour of Work	*Cigarettes*
United States	112
Belgium	58
France	40
Germany	30
Great Britain	21
Russia	16
Italy	15

Here Russia actually sprints into sixth place and beats Italy—by a nose. And Belgium runs surprisingly second. But what a lot of daylight between Belgium and the winner, the U.S.A.!

And we are not yet through with testing these contestants. We have to think of clothes. Men must have workshoes and shirts and overalls, and their women folks must have housedresses—and silk stockings. Let us inquire:

How long must the average factory worker work—in each of these countries—to buy each of these things?

Here are the answers (omitting Russia):

To buy a pair of work shoes the worker must work

In the United States	3 hr. 26 min.
In Germany	8 hr. 9 min.
In Great Britain	9 hr. 3 min.
In Belgium	10 hr. 49 min.
In France	12 hr. 34 min.
In Italy	24 hr. 22 min.

To buy a pair of overalls the worker must work

In the United States	1 hr. 11 min.
In Great Britain	5 hr. 14 min.
In France	9 hr. 12 min.
In Belgium	10 hr. 24 min.
In Germany	10 hr. 50 min.
In Italy	32 hr. 56 min.

To buy a shirt the worker must work

In the United States	1 hr. 28 min.
In Great Britain	4 hr. 3 min.
In Belgium	5 hr. 49 min.
In France	5 hr. 53 min.
In Germany	9 hr. 50 min.
In Italy	17 hr. 5 min.

To buy a pair of silk stockings a worker must work

In the United States	1 hr. 1 min.
In Great Britain	2 hr. 47 min.
In Germany	2 hr. 56 min.
In France	3 hr. 40 min.
In Belgium	4 hr. 32 min.
In Italy	7 hr. 15 min.

To buy a housedress the worker must work

In the United States	1 hr. 28 min.
In Great Britain	4 hr. 17 min.
In France	5 hr. 53 min.
In Germany	7 hr. 8 min.
In Belgium	7 hr. 51 min.
In Italy	21 hr. 8 min.

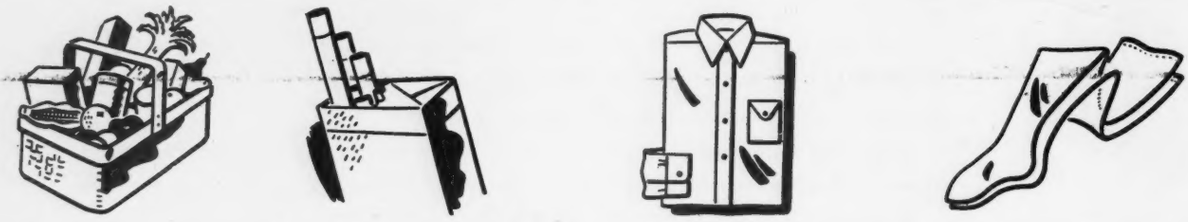
In these races on clothes we may observe:

Great Britain, France, Belgium, and Germany struggle for second, third, fourth, and fifth places. Italy is invariably a very bad sixth—and last. The United States wins easily every time, *every time.*

But these are all preliminaries. We come down now to the really grand finale, the Derby of it all. We will take twenty-nine baskets of food: one week's food supply. We will take one week's supply of cigarettes—140 of them. We will take one shirt and one pair of silk stockings to represent the element of clothing in a week's purchases. We will combine all these things into one total lump of purchases. How long will the average factory worker—in each country—have to work in order to buy the lot?

Here is the pay-off:

To buy a week's food for a family of four, and a week's cigarettes (140), and one work shirt, and one pair of silk stockings, would cost, in hours of work

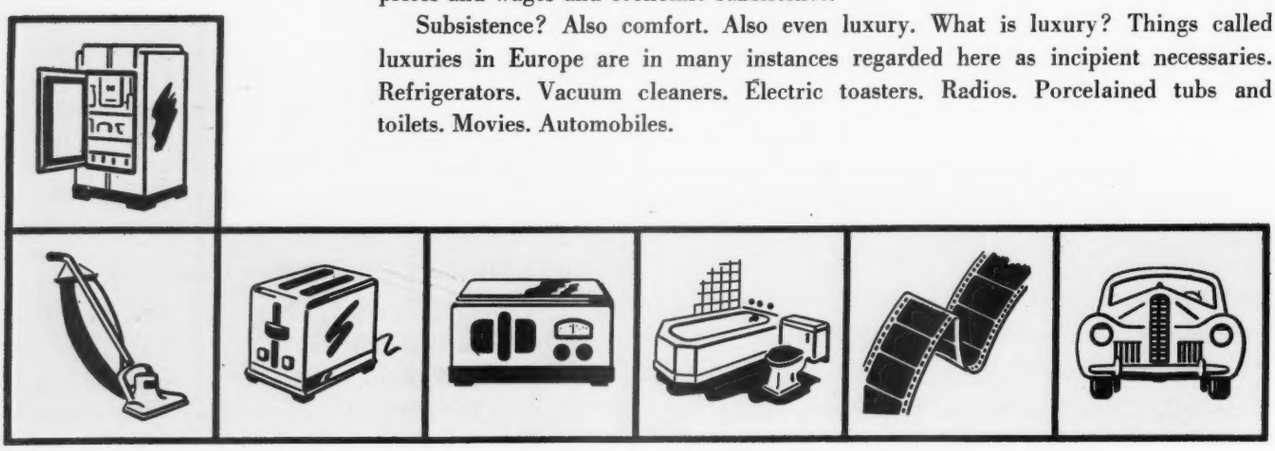


United States	*Great Britain*	*France*	*Belgium*	*Germany*	*Italy*
13.63	35.72	35.81	37.98	44.88	76.73

Look at those figures! The world's most adventurous democracy, the democracy in which economic freedom and individual opportunity are at their broadest, the United States of America, runs approximately three times as fast as the European democracies. Those European democracies—Great Britain, France, and Belgium—run neck and neck. Then comes totalitarian Germany, quite a bit behind. And then comes totalitarian Italy, frightfully behind. If we are asked, "What price democracy?" we can surely say:

It gives its workers in the United States the world's supremely best structure of prices and wages and economic subsistence.

Subsistence? Also comfort. Also even luxury. What is luxury? Things called luxuries in Europe are in many instances regarded here as incipient necessaries. Refrigerators. Vacuum cleaners. Electric toasters. Radios. Porcelained tubs and toilets. Movies. Automobiles.

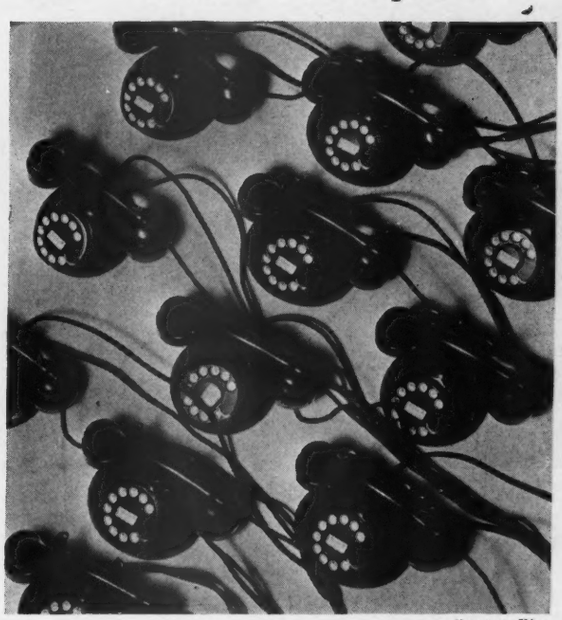


In the United States we have 6 per cent of the world's population

47% **of the world's radios**

Keystone View

49% **of the world's telephones**



Keystone View

72% **of the world's automobiles**

Keystone View

We have one motor vehicle (including passenger cars and trucks) for every 4 persons. In England it is one for every 18 persons, in France one for every 18, in Italy one for every 93.

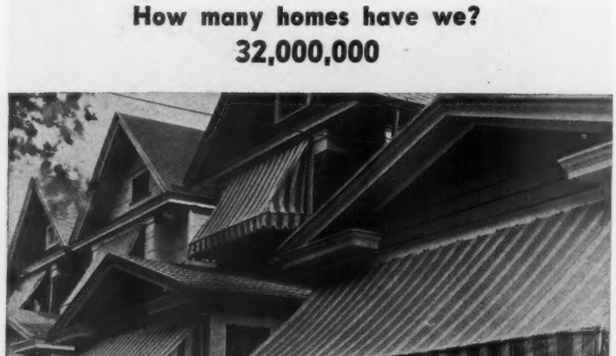
Why is this? Is it simply because wages are highest in the United States? No. It is also because the American worker, with his better *equipment* and his higher *skill*, can produce more *output* in one hour than any other worker in the world. It is these two reasons together—more output and higher wages—that explain the following almost incredible fact:

The average French factory worker, to buy a standard moderate-price automobile, must work 7,295 hours. The German worker, to buy it, must work 5,054 hours. The English worker, to buy it, must work 3,522 hours. But how many hours does the American average factory worker have to work in order to buy it? Only *853*.

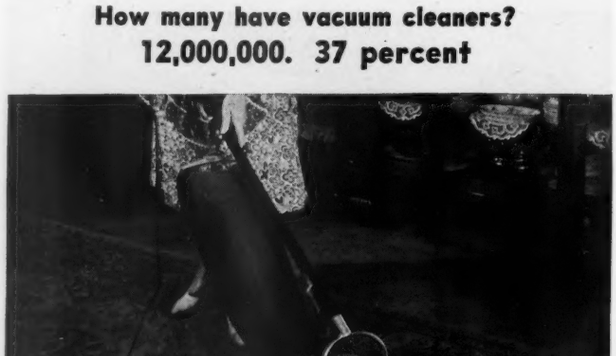
Output per hour of work!

Output per hour of work! That is the soil out of which the high wages grow. That is the root of the welfare of the homes of America.

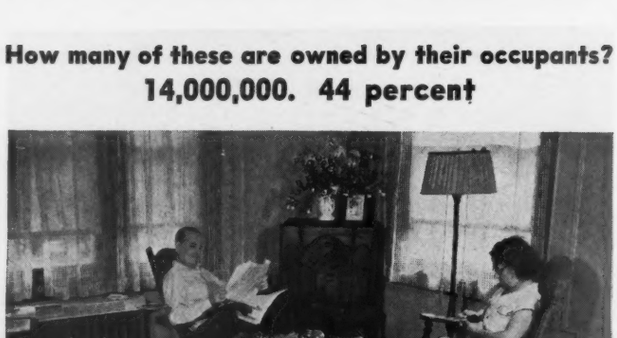
How many homes have we?
32,000,000



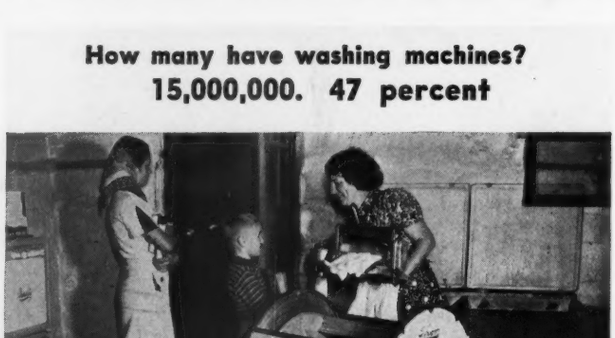
How many have vacuum cleaners?
12,000,000. 37 percent



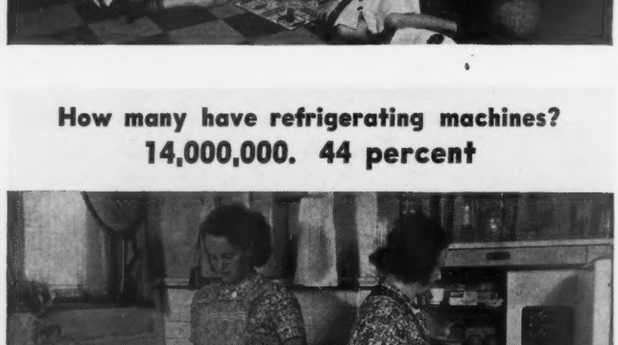
How many of these are owned by their occupants?
14,000,000. 44 percent



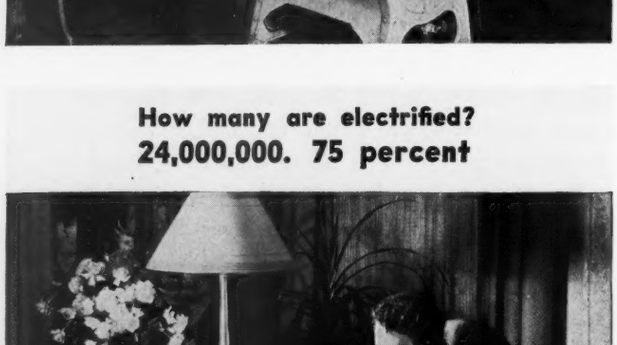
How many have washing machines?
15,000,000. 47 percent



How many have refrigerating machines?
14,000,000. 44 percent



How many are electrified?
24,000,000. 75 percent



How many have radios? Well, unfortunately, there are many American homes that still have no radio. We are still far from a universal distribution and enjoyment of radio programs. On the other hand, however, there are many homes that have two radios, or three. The net outcome is that actually in the United States there are more radios than homes! Homes: 32,000,000. Radios: 40,000,000.

And the American people still have enough money left over to support an amusement industry which now represents an investment of $10,000,000,000.

And they have enough money left over to keep their children in schools. There is virtually no child labor in American factories today. The children are in school, 30,000,000 of them, taught by 1,000,000 teachers.

And, after all these expenditures, the American people still have enough money left over to maintain 45,000,000 savings accounts and to pay the premiums on 120,000,000 life insurance policies. The American people *spend* and the American people *save* on a scale never known before in human history.

But let us not rejoice too thoughtlessly. These triumphs are in jeopardy. Industry, which has produced these triumphs, is threatened. It is threatened by two things.

One is the economic heresy which declares that more and more money for less and less work is the road to prosperity. The *true* doctrine is that *output, output* of goods, *output* of services, *output* of necessaries, *output* of luxuries, is the road, and the *only* road, to the *more money* that can buy *more satisfactions.*

The second thing that threatens industry in this country today is its own smugness with regard to its accomplishments.

Those accomplishments are indeed heroic. We have recounted some of them in the pages which we have here given to comparing the lot of the American worker with the lot of the worker in Europe.

But it is not enough that Americans are better off than the British, the French, the Belgians, the Germans, the Italians, the Russians, the Rumanians, the Greeks.

Americans want to be better off than themselves. They want to go upper and upper all the time. They want better houses, better automobiles, better radios. They also want new things. They are Americans, and they're always on their way.

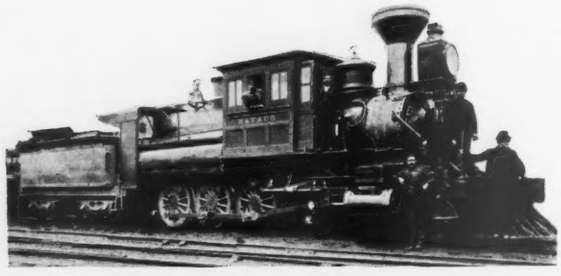
That's the American temperament and this country will be a ruin if that temperament ever dies or even weakens.

America has just started. Of course Americans can live better. Of course they *ought* to live better. And there is a way. That is the next part of this story.

The social achievements of America, already threatened by the practice of false economic doctrine within the nation, now are threatened from without. Against those external forces there must be invulnerable protection. America's defense job will be done in that same spirit of national unity which has brought the nation so far forward in social progress

Aviation Magazine and New York Central System

After many people had said there was nothing more to be invented, our transportation marvels of today came into being. They are typical of what always lies ahead, despite lack of faith and lack of vision. Yes, America could live much better. And America will live much better



America could live much better

It is difficult to set any limits on how much better America could live. A hundred years ago it would have been impossible to imagine how well America lives today.

Many foods now familiar to all of us were then unknown. There were few railroads, no motor trucks, no motor buses, no airplanes. People moved from spot to spot at the pace—we should now say—of snails. There was no electric light, no automatic central heating, no mechanical refrigeration, no radio—in a word, no devices for modern living.

When we think of a better living for America, we naturally think of more new modern devices. But there is another way of thinking about the problem. Suppose that no more new modern devices were ever invented. Suppose that no new basic industries, producing new miracles, were ever again established among us. Suppose that we had to be content with the miracles we now have. Would it mean that progress toward better living would have to cease?

Most certainly not. Millions of Americans today cannot afford to buy a satisfactory amount of our existing commodities and services. They are unemployed, or they are working short time, or their output and earning power per hour is so low that their incomes are inadequate to the purchase of proper supplies of food, shelter, and clothing. They are so far from being able to buy luxurious, modern devices that they are short even of basic necessaries.

For this reason a great many people recently have been asking themselves questions like the following:

What would happen if we could double the incomes of all our families that now are earning less than $1,000 a year? What would happen if at the same time we could substantially increase the earnings of all our families that now have incomes of more than $1,000 a year but less than $2,000? What would happen if moderate enlargements of earning power and of income could be accomplished for all families now below the $5,000 a year level?

Answers to such questions have been worked out by several different statistical organizations, including notably the Brookings Institution, of Washington, D. C. It is not an easy job. There is of course no complete record anywhere of the earn-

ings and spendings of each and every American family. The earnings, however, of great statistical *groups* of families can be approximately determined by the tax records and the agricultural price records and the industrial payroll records and other similar records accumulated by the government; and the spending habits of these families can be extremely accurately determined by studying "sample" families, just as Dr. Gallup interviews "sample" voters in making his election forecasts. This "sample" method produces remarkably reliable results.

Let's start then with the following thought well in mind:

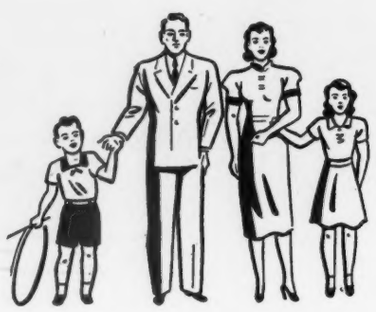
What we want to accomplish is more work, more production, more distribution, and a better living for all Americans.

Two main ways toward this end are currently suggested. The first is to imagine a sharp lift in the incomes of all families now earning less than $5,000 a year. Let us examine that way in the light of the figures collected and published by the Brookings Institution.

We have to begin with the Brookings tabulation of the incomes of American families in 1929. Remember that 1929 was a year of "peak prosperity." Then read the following table carefully, noting how many families there are in the lower income ranges and how few in the upper:

Income Range	*Number of Families in Each Range*
Under $1,000	5,899,000*
$1,000 to $2,000	10,455,000
$2,000 to $3,000	5,192,000
$3,000 to $4,000	2,440,000
$4,000 to $5,000	1,232,000
$5,000 to $10,000	1,625,000
$10,000 to $20,000	412,000
$20,000 to $100,000	195,000
$100,000 and over	24,000
	27,474,000

* 120,000 families which normally have incomes over $5,000, but which had losses that exceeded income in 1929, are included in this group



It is surely an exhibit that suggests possibilities of improvement. Add the first three groups of families together. You will see that out of a total of 27,474,000 families in this country in 1929, there were 21,546,000 who were unable to push their earnings above the $3,000 a year level.

But now:

How much money in 1929 did all these 27,474,000 families *spend?* On shelter? On food? On clothes? On other "consumption goods"? What did they spend on their *living?*

The Brookings Institution has given us the answer. They spent $61,977,000,000.

Naturally the *spending habits* of the lower-income families were different from

those of the higher-income ones. The lower-income families spent a larger *proportion* of their incomes on *necessaries*. The higher-income families spent a larger *proportion* of their incomes on luxuries. So a general raising of income levels would bring greatly increased sales to the manufacturers of devices for better living. But an astonishing fact simultaneously emerges. It is this:

As a family gets more money, although it spends a smaller *proportion* of its income on necessaries, such as shelter and food and clothing, it nevertheless increases the actual number of *dollars* that it spends on them.

Accordingly a general raising of income levels would bring greatly increased

Ewing Galloway

Food, clothing, and shelter. These are man's three necessities. They are the items that are bought first, out of even the smallest income. As income gets bigger, they still are first. Although a smaller *proportion* of the bigger income is spent on these necessities, the actual number of *dollars* is greater

sales also to home-builders, to food distributors, and to clothing manufacturers.

Let us then go on—with the Brookings Institution—to the next step. Let's take the families with less than $1,000 and raise them to an average of $1,139. Let's take the families with more than $1,000 but less than $1,500 and raise them to an average of $1,994. And so on till we come to the families with more than $5,000. Those we will leave as they are. We then get a Brookings Institution table as follows:

Average Income	*Number of Families*
$1,139	5,779,000
$1,994	5,754,000
$2,608	4,701,000
$3,389	5,192,000
$4,468	2,440,000
$5,336	1,232,000
At present with more than $5,000	2,376,000**
	27,474,000

** 120,000 families which had losses that exceeded income in 1929, but which normally have incomes over $5,000 are included in this group

Very well. Now, with this new arrangement of income levels, how much would our 27,474,000 families spend on all sorts of "consumption goods" put together? Again the Brookings Institution gives us the answer. They would spend $77,430,000,000.

In 1939 they did spend $61,977,000,000. Now, with the far from exorbitant increases that the Brookings Institution has imagined in their incomes, they *would* spend $77,430,000,000. It is a lift of 25 percent in the sales that manufacturers and distributors could make to them.

The effect upon *unemployment* would be terrific. *Unemployment would disappear.* For observe the following chain of facts:

1. The total number of employed in 1929 was approximately 48,000,000.

2. Families below the $4,600 a year level did two-thirds of our 1929 national spending. That is, they employed two-thirds of the employed. That is, they employed 32,000,000 of them.

3. But if they increase their spending by 25 percent, they will then employ 32,000,000 plus 8,000,000, which is 40,000,000.

4. But the families above the $4,600 a year are continuing to employ their one-third of the employees, which is 16,000,000.

5. The total of all the employed will then be 40,000,000 plus 16,000,000 which is 56,000,000.

6. But there are not 56,000,000 employables in the United States today.

This demonstration cannot be gainsaid. The moderate income increases imagined by the Brookings Institution would abolish unemployment. The present unemployed would be busy making and distributing things for people to use—or would have jobs in the service industries.

In 1929 the manufacturing industries employed 11,000,000 people. How many more would they employ under these conditions? The answer is that they would need to employ less than 2,000,000 more.

For the last twenty-six years our total employment in the United States has steadily averaged 4.29 times the amount of employment in the manufacturing industries. Every manufactured product must be shipped, sold, delivered. It gives employment to railroaders, to truckers, to warehousers, to shop-keepers; and they, with their earnings, employ doctors, lawyers, musicians, and other professional workers. Thus an increase of 1,864,800 in the number of factory workers would mean an increase of 8,000,000 in the total number of all workers.

Total jobs average 4.29 times jobs in the manufacturing industries. To increase total jobs by 8,000,000 would require only 1,864,800 additional workers in factories

It makes a very pretty picture. Just lift all the lower-income people to somewhat higher income levels, and there you are! No unemployment. The country prosperous.

But how to do it? Let us face facts. Wages paid have to depend on output produced. The country cannot pay $1.25 for $1.00's worth of output. That would

Ewing Galloway

be the short way to complete national bankruptcy. As a nation, in order to earn more, we have to produce more. Or, to put it another way, as a nation, in order to earn more, we have to produce and sell *better* and more *economically* and *efficiently*.

We cannot arbitrarily pay 75 cents an hour to a man whose hour's work is worth only 65 cents. But we can teach that man to produce more work and better work in one hour.

We can teach him in two ways.

First. Industrial engineers have abundantly proved that hardly anybody is working at more than along about seventy percent of his possible healthful easy efficiency. Almost everybody, without any undue strain, can be stepped up in amount and quality of output.

Second. The worker can be given better machines to work with. Too many of our machines in America today are too old. We need large numbers of newer and better machines out of which the workers can get more product and get it at a *lower cost.*

The worker can be given better machines to work with; on them he can produce more work and better work per unit of time

And that thought brings us to the only true way toward abolishing unemploy-

The Bullard Company (Ewing Galloway)

ment and installing a strong and permanent prosperity. *It is the way that runs through better machines, better employees, lowered costs, lowered prices, and more money left in the pockets of the people to make additional purchases and thus to put more workers to work.*

It is a vast economic error to think that America has been made rich by its new devices for modern living. It would have been useless to manufacture those devices unless people had been able to buy them. And why were they able to buy them? Only because the prices had been lowered on the necessaries they were buying *and thus they had money left over to spend for better living.*

It is *surplus* purchasing power, *produced by lowered prices,* that has made our better living possible. And it is only that kind of surplus purchasing power that can take us forward into a greater future.

So let's make another statistical calculation—this time one of our own.

In 1929 our factories sold $69,235,582,000 of goods. Imagine a cost and price reduction of 15 percent. We are convinced that most engineers would say that *under right conditions* a 15 percent reduction would be readily feasible. So let us imagine it. Then our $69,235,582,000 of factory goods would be sold for $58,850,244,700.

But let's "roughen" and "round" these figures. The public, instead of paying $69,000,000,000 for factory goods, would be paying $59,000,000,000. It would have $10,000,000,000 left over. Proceeding to spend that $10,000,000,000 on additional factory goods, it would give employment to 1,865,000 new factory workers. This would raise factory employment to a total of 12,865,000. But we have seen that total employment is regularly 4.29 times factory employment. So multiply 12,865,000 by 4.29. The answer is approximately 55,200,000 employed workers.

But that is also approximately the total number of employable workers in the United States today.

So we have looked at two ways of abolishing unemployment. One is paying people more dollars for the same quantity and quality of output, which—generally speaking—is utterly impossible. The other is more and better work *by the employed* and lowered prices and surplus purchasing power *for the whole people.* WHICH CAN BE DONE.

Then why not start doing it right off?

Well, a moment back we remarked that most industrial engineers would call a 15 percent cost and price reduction readily feasible *if conditions were right.*

But *are* conditions right in America today? Most unfortunately they are not. They are far from right.

Government is doing a lot of things to make them wrong. Labor is doing a lot of things to make them wrong. And industry is doing a lot of things that give government and labor excuses for making them wrong and keeping them wrong.

What are these wrong conditions? Let's look at them frankly and state them candidly. They constitute the next part of our story.

Because of our expenditures for defense it is more than ever necessary to work toward increased purchasing power by means of lowered prices brought about by more efficient production. By that route America made her gains. By that route she must retain them while she carries the extra burden of defense

Authenticated News Photo

War represents large economic waste. The costs of war—and likewise the costs of defense—must be paid for out of a nation's normal production. Even if we were not facing the extraordinary burden of defense, it would be necessary to remove the brakes that are holding America back. How much more necessary it is to do this in the hour of America's need for protection!

Why America is not going ahead faster

Time was when America went ahead pretty steadily. Even during depressions there was a sort of common consent toward trying to get back by the old proved methods to the old proved routine of progress. Right up to the time of our entrance into the First World War there was what you could call a *united psychology* in the American people. Criticisms indeed there were of individual business leaders. Bitter conflicts there were on this detail and that detail between rival economic groups. But there was substantial agreement on the proposition that ours was a "business nation" and that the leadership of it should and must rest with the business community. The business "success story" was still in full bloom and still indicated the main objective of the American spirit.

The First World War marked the coming of changes and dislocations. Let us briefly review them.

The war itself represented large economic waste. We spent billions of dollars on things to be instantly shot off and blown away. We also loaned billions of dollars to our European allies. We thought that those billions would be returned to us. They were returned to us only in small part. The war itself—from the economic point of view—was waste and loss; and the loans to Europe were also in a high degree waste and loss.

But there were also other disastrous consequences. Our industrialists built large wartime plants for which afterward there was often no adequate peacetime use. Our farmers, in response to Europe's wartime needs, expanded their acreage of cultivation in great excess of the world's peacetime requirements. Both industrialists and farmers found themselves in 1920 with a vast unnecessary and burdensome capacity on their hands.

But there was an additional consequence even more unfortunate. Both industrialists and farmers in large numbers had acquired the speculative fever. Farmers went into debt to buy land far beyond all possibility of practical profitable operation. They hoped to sell it at a fairy price and retire to Southern California. Industrialists meanwhile had produced among themselves a large crop of "war millionaires." They lost many millions to the tax collector, but they still had many millions left; and they retained out of their wartime experiences the temperament

often of speculators and adventurers rather than of sound, steady productive business leaders.

Thus, after the short depression of 1920, we plunged into the recovery period that lasted from 1921 to 1929. It is our conviction that the United States should not look back upon that period with unalloyed pride.

Agriculture continued to be depressed. Special agricultural relief legislation began to be enacted in 1921. It came to its first full flower in 1929 with the Federal Farm Board which took the Federal Government into being a dealer in agricultural commodities on a gigantic scale.

In industry contemporaneously there was a burst of prosperity, but it was marked by enormous excesses and errors. Technological improvement continued and costs came down, but prices did not come down at the same rate. The consumer did not get the full benefit of the cost reductions. Money went into speculative mergers and combinations, into speculative skyscraper office buildings and apartment buildings, into speculative real estate booms in Florida and elsewhere, into speculative buyings and sellings in the stock markets of New York and of every other leading city. Clerks and stenographers joined business men in great multitudes in being more interested in the quotations of the market than in the products *and proper prices* of industry.

Let us never forget that we do not want to return to a high-price, speculative era. We want to return to sanity—and to morality. We want to return also to the substantial and essential *national unity* that we had before the First World War.

Are we returning to those things? No. We are going farther and farther away from them.

What has the Government been doing? Let's mention a few of its exploits.

It has tried to *create* purchasing power by simply *transferring* it from one citizen to another. It has robbed Peter to pay Paul to do useless work or even no work at all. Toward that end it has lifted taxation to destructive levels.

Ewing Galloway

In 1929 the taxes of our governments (federal and state and local) took 12.3 cents out of every dollar of our national income. In 1938 they took 22.4 cents out of that dollar. That's an increase of 82 percent. Much of it has had to be added to the costs and prices of the products of industry. The main mission of industry is to bring prices down. But how is it going to bring prices down if governmental policies are forever pushing costs up?

Moreover, our present taxation system is on its way not only toward crippling industry but toward crippling industry's consumers in even the lower-income brackets. The riches of the rich cannot support the present Federal Government. In 1936, if every penny of income had been taken away from every individual above the $10,000 level, the amount collected would not have sufficed to pay the expenses of the Federal Government for six months. And, further, if the Federal Government in 1936 had confiscated the total of all incomes above $5,000, the amount collected would have failed to meet the Federal Government's 1936 expenditures by a margin of $3,000,000,000.

Therefore the poor have to be taxed. The man who earns $80 a month now pays direct and indirect taxes—on the average—of $123.48 a year. The man who earns $150 a month pays $242.64. *A large part of his purchasing power is transferred from paying people to make goods for him to paying people to govern him.*

Since 1933 the number of people on the payroll of the Federal Government

has increased from 578,574 to 936,689. This does not include people on relief or in military service. It means people paid to turn all the old wheels *and hundreds and hundreds of new wheels* in the Federal Government's direct agencies in Washington and throughout the country. It means that the Federal Government has increased its payroll staff in seven years by 62 percent. Can anybody believe that we are now getting 62 percent more of useful service from the Federal Government? Remember:

Every governmental employee is riding on the backs of the nation's productive workers.

In 1937 there were 479,000 wage earners in the steel industry. It would have taken more than ten times their total wages for that year to provide the $8,400,000,000 that the Federal Government spent in 1937.

So, of course, the Federal Government has to borrow. In the last eight years the government's total revenue was $32,300,000,000. It meanwhile spent $54,600,000,000. It borrowed the difference. It borrowed $22,300,000,000. For eight years it has been spending one and three-quarters times its income. Would a business man have much credit confidence in a customer who for eight years had been spending one and three-quarters times his income?

A business man cannot be blamed if he looks at the credit structure of the Federal Government with dismay and alarm. Unlike some politicians he knows that not only the interest *but the principal* of our present federal debt of $43,000,000,000 must be some time paid if the country is to regain the economic momentum that it had at the time of our entrance into the First World War, when our federal debt was less than $3,000,000,000.

Therefore, to the bewilderment of some politicans, the business man exhibits "lack of confidence" in the Federal Government. Politicians of that sort then begin to rebuke the business man. They begin to call him names. They begin to "regulate" him, not only to correct his mistakes of the past but also to subject him to their political scrutiny in every detail of his daily business life. They also talk in a manner which implies that they are thinking of additional regulations which some day—some day—they will disclose. Thus to intimidation they add uncertainty. The business man is driven to feel that the present is bad and that the future may be—may be—worse. There can be no resumption of full economic progress under such conditions. They are not right conditions. They are very, very wrong.

Labor has added to them. It has imitated the workmen of France and has adopted the view that hours can be shortened and that wages can be raised *first* and that then national productivity (and prosperity) can be made to follow. All history teaches the contrary. All history teaches that productivity must come *first* and that higher wages and shorter hours—in the midst of prosperity—follow afterward. The leaders of labor in this country have put the cart before the horse and are flogging the cart in a vain effort to make it pull the horse.

From January, 1933, to September, 1937, the average hourly rates in factories went up 46 percent. Did this increase productivity? Did it reduce costs and thereby promote the reduction of prices? No. According to the government's own figures the labor cost of industry's products went up—per unit—31 percent. This tended to hold prices up for consumers. And who are the consumers? Principally working people. There could have been no policy more suicidal to labor's own

Wide World

interests. This was proved in France. It is being proved all over again in the United States today.

And it is being proved in the midst of wholly unnecessary strife between employers and employees. Recent labor legislation has been so administered as to produce industrial war in industry. In the seven years, 1933–1939, American factories were the victims of 17,862 strikes which made 8,260,787 employees idle and which inflicted upon the country a dead loss of 121,207,719 man-days of work. Again the mission of industry to reduce prices was hampered by time wasted and therefore costs increased.

But can industry simply point the finger of blame at government and labor and attribute no blame to itself? Well, human life just never happens that way. When a whole nation goes off the track, it takes all the cars with it.

Much of industry joined itself to labor and to government in supporting the National Industrial Recovery Act of 1933. It accepted the restrictive rules and regulations of the Blue Eagle. It did this in order to secure a supposed advantage for itself. It did it in the hope of being allowed to disregard the Sherman Anti-Trust Law and to curtail outputs and divide markets *and raise prices* through "code authorities." In other words, it went against its own historical nature of competition and *lower prices* and surrendered to the government's own theory of prosperity through *controls* and *strait-jackets*. This was a renunciation of the American system and its effects have not yet passed away.

In the second place, much of industry has opposed all new government measures without any distinction at all between those that are wholesome and those that are poisonous. The result is that masses of voters have come to pay little attention to industry's remonstrances at Washington. They think that too many industrialists are professional squawkers, whether hurt or not.

In the third place, much of industry has failed to try to come amicably to terms with organized labor. Collective bargaining, according to the Supreme Court, is a constitutional right of American citizens even in the absence of any special collective bargaining statute. Much of industry has been too disregardful of this constitutional right. The result has been unnecessary hostility toward industry by many labor elements.

What do we then need? We certainly do not need any more mutual recriminations. Every wheel and belt, every nut, screw, and bolt in our whole economic and political system has been in some degree at fault. Mutual recriminations, mutual hostilities, are only prolonging our discomfitures and our failures.

Our manufacturing corporations, taken as a whole, had to draw upon their surpluses in 1930, in 1931, in 1932, in 1933, in 1934, in 1935, and in 1938. They made some additions to surplus in 1936 and 1937, but not enough to recoup themselves for the dollars which they had already drained off from their rainy-day funds. Industry in the United States today is anemic and neurotic. It is feeble and afraid. It needs a blood-transfusion of confidence and courage.

This can come only from a new "union" among us, not only of states, but of all economic classes. With us Americans a "class" is not a social thing. It is only an economic thing. It should be easy for us to join hands over the barriers that separate the economic compartments in which our daily work places us. Those barriers must come down. We must once more have an America of the kind that Walt Whitman knew in his poems, an America in which economic divisions are nothing in comparison with the underlying and overlying unity of spirit. The way to achieve that unity is pointed out in the fourth part of our story.

Mechanization — low cost production — low selling prices — increased demand — more and more jobs

Westinghouse

Government, and labor, and industry can all make contributions to economic progress. They can all help to reduce the country's costs. They can all help to make it possible to reduce prices. They can all help to accelerate and to diffuse prosperity. When they begin to do these things *jointly*, when they begin to do them not as mutual enemies but as mutual friends and collaborators, then indeed these things will be forwarded at a speed not only equal to our best in the past, but far, *far* beyond it

How industry, labor, and government can help America

It is said—and truly—that all economic elements among us must now cooperate toward national defense. It is known that our national defense expenditures (not appropriations) soon will amount to a minimum of $5,000,000,000 a year.

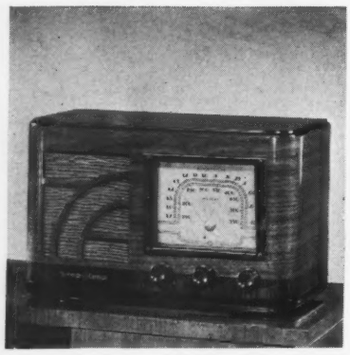
Let us then do a little easy arithmetic. Our national income is running along at about $70,000,000,000 a year. If we spend $5,000,000,000 of it on national defense, we shall have $65,000,000,000 of it left. That is thirteen times as much as $5,000,000,000. So then:

If it is worth while to get together cooperatively on $5,000,000,000, it ought to be thirteen times more worth while to get together on the problem of the $65,000,000,000. And it would be. *And then some.* Because:

If industry and labor and government will work energetically on the $65,000,000,000, they will be able some day to push it up to $100,000,000,000, which is just about where it ought to be now, if we had been maintaining the same rate of economic progress as in our best past. And then the $5,000,000,000 for national defense would be an amount that we could readily afford.

But we ought to remember that cooperation is something more than just a nice phrase and a sentimental state of mind. Cooperation is a mere waste of emotion unless it is directed toward a known given end. And what is that end? We have stated it before, but we here state it and affirm it again.

Cooperation in the economic field between industry and labor and government has to be toward using our working time more efficiently and productively. It has to be toward getting out a larger quantity and a better quality of work in each working hour, each working day, each working year. It has to be toward reducing the cost of each unit of output. It has to be—finally—toward selling each unit of output to the consumers, to the people, at a lower price. This is the only process that can bring us to prosperity, and it requires, for its success in present circumstances, a hearty and loyal collaboration of the men who make laws, the men who



A 6½ percent reduction in the average price of radios, for example, would provide $18,000,000 of new purchasing power, to be used in buying more radios or in buying other things that people want and need

Ewing Galloway

Industry, in order to bring prices down, must bring costs down. Yet costs of important raw materials have gone up. The price of rubber has gone up 27 percent since 1930

lead labor, and the men who operate industry. They should all of them have their economic goal clearly and continuously in mind.

Let's consider, for an illustration, the radio. The average price of a radio is now $31. The number sold at that price in a year is approximately 9,000,000. That's a total of $279,000,000 spent by America each year on radios.

Now let's suppose that the average price is lowered to $29, only a 6½ percent reduction. There will be enlarged sales, but let's forget them. Let's just think of the 9,000,000 a year of current sales. For 9,000,000 radios at $29 apiece the public will pay $261,000,000. For the same number at $31 apiece it has been paying $279,000,000. So now it has $18,000,000 left over, $18,000,000 of new purchasing power that is *really* new purchasing power. Not purchasing power stolen from the pockets of some other citizen, but true valid new purchasing power created by the improved intelligence and the improved efficiency of industry and labor.

With that new $18,000,000 the radio customers can now turn around and buy 3,600,000 pairs of $5 shoes. Or 360,000 $50 vacuum cleaners. Or 90,000,000 gallons of 20-cent gas. Or 3,600 $5,000 houses.

The addition thus made to national human welfare is obvious, and so is the acceleration thus given to the whole national economic machine.

But industry today is gravely hampered in its task of giving the economic machine that sort of acceleration. Industry, in order to bring prices down, must of course bring *costs* down, but today it sees many of its costs put up by forces which it cannot control.

Since 1930 some of its raw materials have gone up very considerably. The price of tin is up 21 percent. The price of rubber is up 27 percent. The price of wool is up 33 percent. The price of finished steel is up 10 percent.

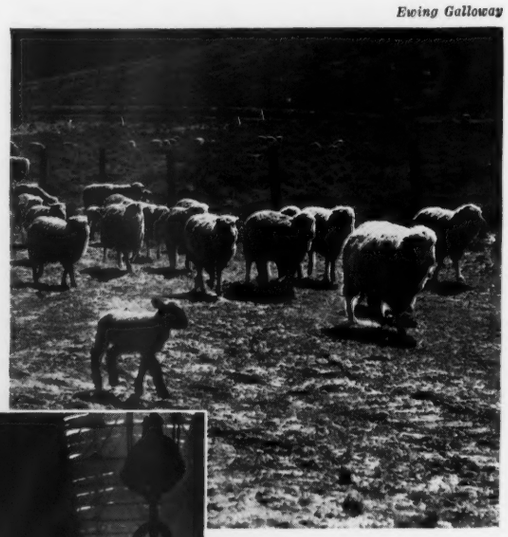
The average hourly wage rates of labor have gone up 25 percent.

And industry's tax bill has more than doubled.

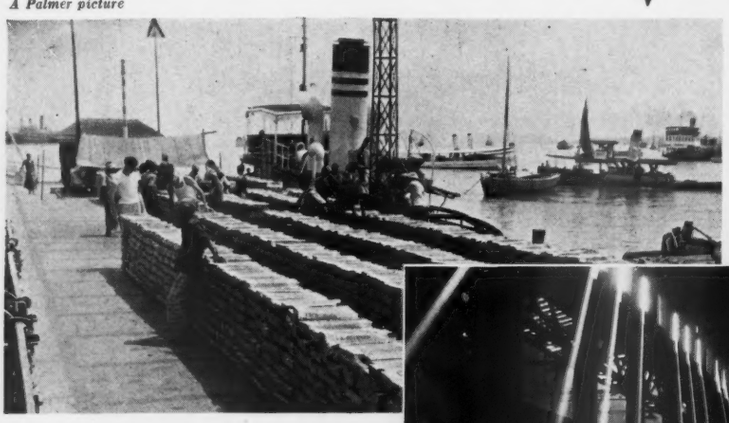
It is a high tribute to the ingenuity of industry that in these circumstances its prices to its customers have gone up only slightly on the whole, and in many instances have not gone up at all.

Ewing Galloway

The price of tin has gone up 21 percent. For the most part, higher costs in raw materials have been beyond industry's control ↓



A Palmer picture



And finished steel—its price has gone up 10 percent. Here is a material of vital importance to the national defense program, because of its predominant place in armament →

Ewing Galloway

Wool, too, is in great demand for war supplies. Manufacturers of uniforms and blankets are handicapped in price reduction when their raw materials cost too much. The price of wool has gone up 33 percent since 1930

But the fight against adverse conditions, including governmental uncertainty and hostility, has produced several evils even more menacing than *immediate* higher costs. One of the most serious of these, and one that will soon show itself in *ultimate* higher costs, is the slackening of new investments in new machines.

Machines have to be better and better, or costs and prices cannot significantly go down. And our machines in America today, on the whole, are not getting better and better in the way they should. Many of them—far too many of them—are too old. And we can't get away from the fact that they are getting older.

Take machine tools, for instance. They are basic. They are used to make other machines. They are also used to make many articles which are in everyday use by the public. They are at the very foundation of our economic life.

In 1925 44 percent of all our installed machine tools in America were more than 10 years old. That was not too good, but it has kept on getting worse. In 1930

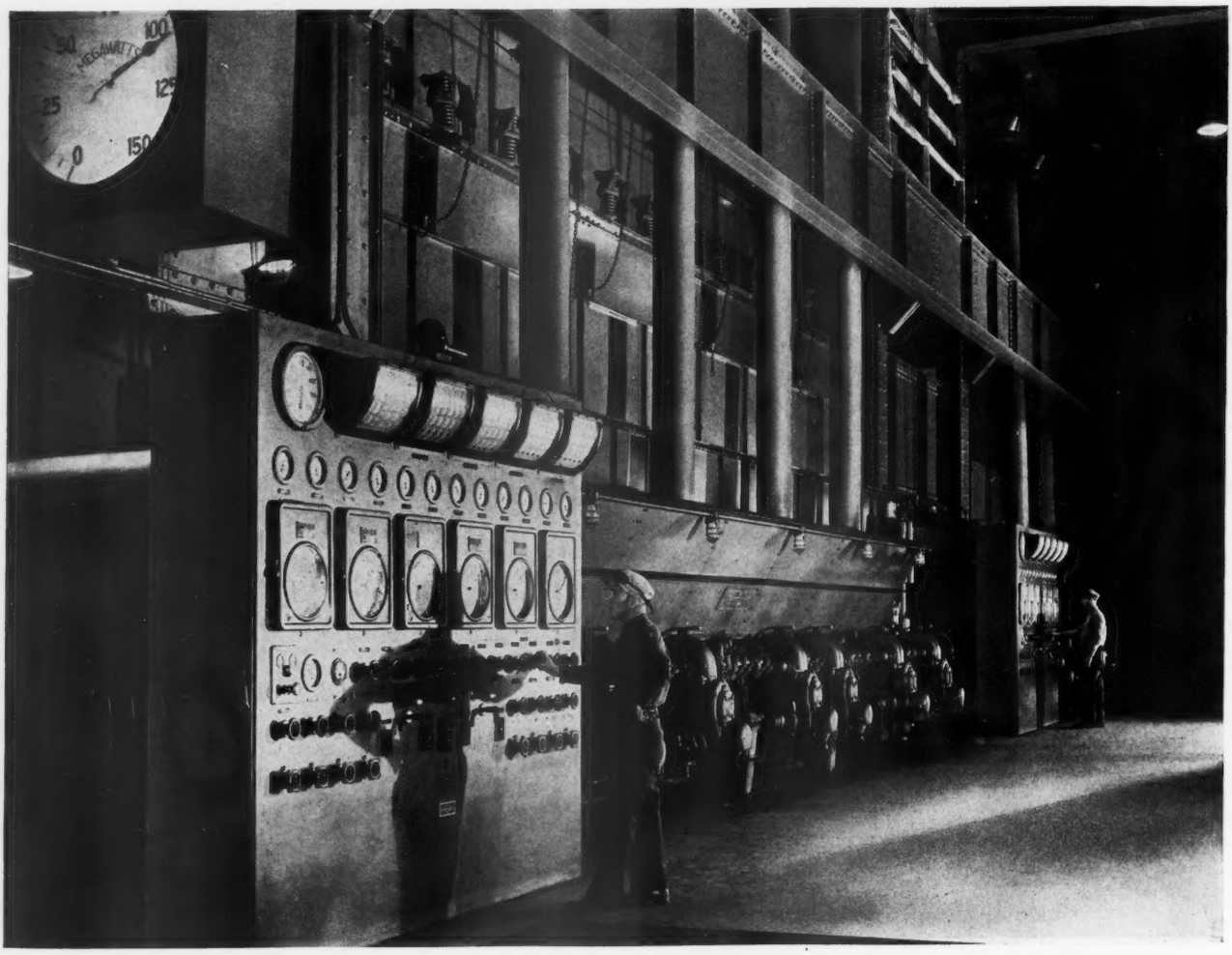
We need more new machine tools in our factories. Today, 70 percent of America's machine tools are 10 years old or older. Yet the design of machine tools has been improving right along. The improved machines can produce *more* and *better* production than the older ones. More and better production is what America needs

Cincinnati Milling Machine Company

the percentage of our machine tools more than 10 years old had gone up to 48. In 1935 it had gone up to 65. Now—in 1940—it has gone up to *70!*

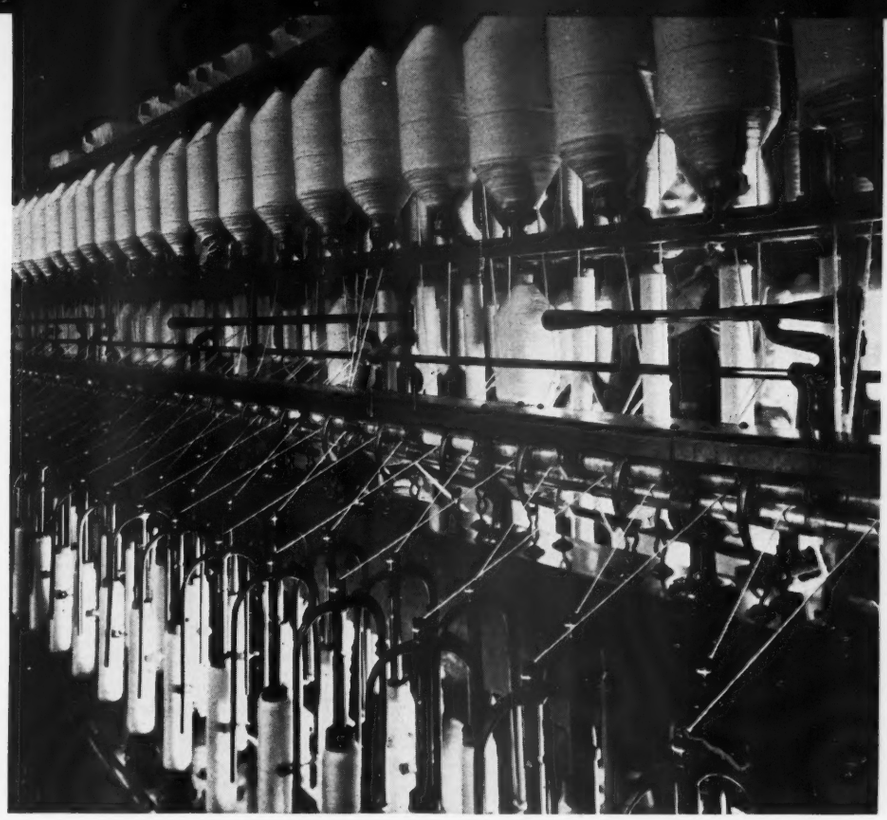
In other words, *less than one-third of our machine tools in America are now less than 10 years old.*

That is not a good situation. The designs for machine tools are improving all the time. The newer ones, *on the whole,* can produce more and better work than the older ones. We need more newer ones in our factories. But, instead of increasing the percentage of the newer ones, we are steadily increasing the percentage of the older ones. That is not the road to perfected effectiveness.



Unlike the modern, stoker-fired boiler shown above, much of America's steam generating and using equipment (actually 50 percent) is more than *20* years old. Wasteful power plant equipment helps keep manufacturing costs, and therefore prices, up

We find similar situations in other fields. Twenty-five percent of our water-tube boilers are more than *20* years old. So are 50 percent of our fire-tube boilers, 25 percent of our automatic stokers, 67 percent of our steam engines. Much of this old equipment is wasteful of fuel and steam, and tends to keep costs (and prices) up.



Here is modern textile machinery. Too bad that it represents only 50 percent of America's textile making equipment as to age. The other 50 percent is 15 years old or older

Another example is textile machinery. More than 50 percent of all the production machines in the textile industry are 15 years old or older. Here in this industry we have 1,750,000 machines, and some 960,000 of them are 15 years old or older!

We cannot long tolerate such situations in the world of today. Germany, whether victorious or defeated, is going to wield an influence that will mechanize Europe to a degree of efficiency and to a degree of modernity never before known. Let us not delude ourselves into thinking that the United States is perfectly mechanized. To meet the competition of the future we shall have to install new enlarged and improved mechanizations on a stupendous scale and at a cost of billions upon billions of dollars.

To modernize our railroads, to give them really modern roadbeds, really modern freight cars and passenger cars, and really modern locomotives, and thus to pull up our average railroad performance to the level of our present best railroad performance—that's in itself, by all valid testimony, a $5,000,000,000 job.

New York Central System

We are confronted with the need of a vast new industrial mechanical upsurge in America. Fate has made us the world's key nation. We cannot handle that fate as a distracted and divided people. Nor can we handle it through the dictatorial unity that the German people have embraced. We have to handle it as free men and women. And what does that mean?

It means that each element among us, in order to get benefits, will have to make concessions. It means that each element among us, in order to get advantages, will have to make sacrifices. Among a free people, just as no one man will be permitted to dictate, so no one economic element will be permitted to dictate. In America we now approach an age in which patriotic compromise and comradeship are a national necessity.

From that point of view let us sketch the respective duties of industry and labor and government.

We begin with industry because we think that industry has to take the lead. By industry we here mean, of course, the men who have assumed the powers and

the duties of industrial management. They know the economic process best. They therefore must lead. They will no longer be permitted to dictate, but they will properly be expected to lead. And what is leadership?

Its eternal symbol is the medieval nobleman who marched to battle at the *head* of his followers. A leader is a man who goes out in front and *takes chances.* No other kind of leadership is going to save the America of free enterprise.

Industry, we believe, has duties to labor, to government, and to the consuming public. We shall try to state them succinctly.

Toward labor industry's duties are these:

1. Industry should strive to make employment regular instead of irregular. It should strive toward "employment stabilization." Many firms have made great progress toward this end. Almost all firms can make *some* progress toward it.

2. Industry should forever introduce new and better machines and new and better methods, but it should not allow these improvements to mean dismissals for wage workers. Every wage worker thus dismissed is a new enemy to industry. Wage workers displaced by technological developments should be given other jobs about the plant. If an excess number of employees thus develops, it will not be for long. Normal departures from the payroll, through sickness or death or old age or acceptance of other employment or dismissal for true cause, will soon adjust the balance.

3. Industry should sincerely and unequivocally recognize labor's constitutional right of organization and of collective bargaining, and it should strive to turn collective bargaining toward its true goal, which is cooperation between labor and capital for improved production. This cooperation should include a scientific setting of wages, so that pay would be proportioned to production; and it should include cordial recognition of individual good performance. Workers are human beings before they are workers, and industry should come to human terms with them and with their organizations.

Now for industry's duties toward government. They are:

1. Industry should discriminate between laws that really hamstring business and laws that aim at humane and beneficial social reforms. It should resist the hamstringing laws, but it should go to Washington and zealously advocate the valid social reform laws. In this way the electorate would be brought to see that industry is not just simply anti-everything; and in this way the influence of industry in Washington would be solidly advanced.

2. Industry should not run to Washington, as in NRA days, to seek elaborate legislation against troublesome business practices when a little more honest self-policing can in the end accomplish the same result.

3. Industry should frankly accept the competitive principle that is embodied in our federal anti-trust laws. It should not denounce, it should demand, the enforcement of those laws. It claims to believe in competition. Let it then enthusiastically accept the enforcement of competition. If in certain sections of industry it is thought that some "cooperation" between competitors is desirable, let the example of the National Association of Securities Dealers be followed. They did not go into a private conspiracy. They approached Congress and got public permission for "cooperation" under public scrutiny. Let industry do nothing that is

in the slightest way underhanded. Let it say to the government: Our central principle is competition, and we welcome your assistance in making that principle live.

So much for industry's duties toward labor and toward government. But it also has duties to its customers, to consumers in general, to the people at large. Those duties are, we think, these:

1. Industry should vigilantly study not only the possibilities of new products but also the possibilities of new markets for existing products. It should strive continuously to bring its existing products within the reach of the purses of the lower-income groups. It should consciously endeavor to spread economic comfort down into the ranks of the "ill-housed, ill-fed, and ill-clad."

2. It should maintain cordial contacts with bona fide customer organizations; and it should cooperate with those organizations toward scientific standards in consumers' goods and toward truthful and informative advertising. In other words, industry should lead in setting standards, not let the government do the job.

3. Above all, industry should publicly proclaim its dedication to the principle of sharing the benefits of lowered factory costs equitably among the stockholders, the employees, *and the consuming public.* It should continuously marshal its accomplishments in the direction of *lowered prices.* It should conduct educational campaigns recounting those accomplishments. It should regard the whole national consuming public as its true final client. The verdict of that client will decide whether industry, as we know it, is going to live or die. Industry should willingly and consistently serve that client with lower and lower prices, and it should *tell the world* that it is doing so.

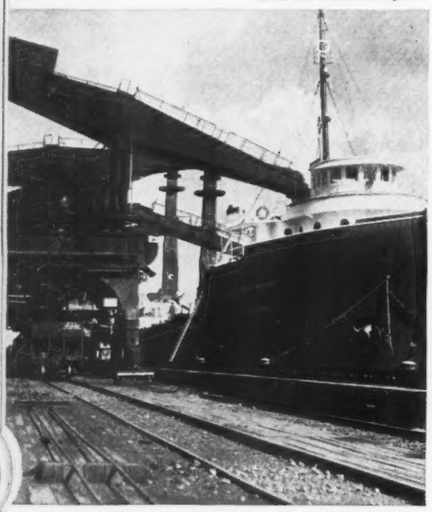
Industry, however, since it constitutes our economic leadership, must take a hand also in trying to bring labor and government to a consciousness of the duties which they, in their turn, owe to the country's economic future.

A root of great error in labor circles is to be found in labor's general unawareness of the fact that labor cost is the chief cost of all things. Economic activity begins with the materials which we take from the ground—plants, trees, rocks, coal, oil, gas, ore. Let's take iron ore as an example.

It is worth little as it lies in the ground. It has to be taken out by labor. Labor

Ore is worth little as it lies in the ground. It has to be taken out by labor. Right there begins the process of adding work to raw material to create something that has value because it can be used for man's benefit

New York Central System



The chief cost of making and operating the ore-lifting machine, and all other machines, is labor. Man is not abolished; his labor is the central fact in every machine we have

By raising the price of his service too high the grass-cutter loses his job, because his customers refuse to buy. By raising their hourly rates too high, factory workers lose their jobs, because the consumers of the products they make refuse to buy

is the chief cost of digging it and of piling it in cars. Labor is the chief cost of transporting the ore to the blast furnace. Labor is the chief cost of operating the blast furnace and of smelting the ore, along with coke and limestone, into iron. Labor then has to be paid to make the patterns and to make the molds whereby the iron is made into castings. Finally labor has to be paid to machine the surfaces of the castings and to assemble the finished castings into usable products.

People are often deluded by watching the operations of machines. They see a machine lifting iron ore out of the ground and they say: Everything now is machines, and man is nothing. But the chief cost of that iron-ore-lifting machine was labor; and labor is the chief cost of operating it in the iron-ore mine. Man is not abolished. His labor is the central fact in the creating and operating of every machine we have.

Now, of course, somebody owns the land in which the iron-ore mine is situated; and he, too, has to be paid. And somebody owns the machines which in successive stages help to change the iron ore into usable products; and he, too, has to be paid. And somebody does the managing of each stage of the process; and he, too, has to be paid. Some of these men may get very large payments, individually; but statistical analysis shows that the total cost of all of them put together is a small amount in comparison with the cost of other forms of labor.

Most working people do not realize this. They have not been taught to know it. Many of them think that "capital" gets the big hunk of the national income and that labor gets the leavings. The fact is that out of the total paid to employees, management, and owners, 73 percent goes to wage earners and salaried employees, not including the high-salaried company executives. There is room here for a great deal of highly desirable adult education. Industry might do well to promote such education—in basic economics.

Another root of error in labor circles is labor's general unawareness of the fact that a wage is a *price* and that, just as a manufacturer can price his goods out of the market, so a workingman can price his labor out of a job. This point can be illustrated to the simplest intelligence by the homely job of grass cutting.

Many men are too busy to mow their own lawns, or they prefer to play tennis or golf. So they hire a grass cutter. The grass cutter wants to mow the lawn because he wants to support himself and his family. Often he has a considerable family, and every time a new baby comes along he needs new additional dollars.

So he asks the owner of the lawn for a raise. He lifts the price of his labor. The owner of the lawn is sympathetic. He has a family, too. He appreciates the troubles of a father. He grants the raise. And he grants another raise, and another.

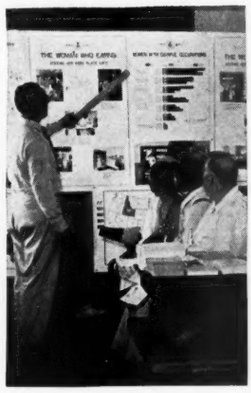
But at last, in the ordinary case, there comes a time when he says to himself: "That golf game isn't worth all this. I'll mow my own lawn."

And the grass cutter is out of a job. Nor can he really stop that kind of thing by forming a union of all the grass cutters on earth. Let's suppose that the union established the inflexible rule that no grass cutter would work for less than $12 a day. A few multi-millionaires would still hire grass cutters. But the men of moderate means would all be mowing their own lawns. The total number of employed grass cutters would go down almost to zero, and *the total of all wages paid to grass cutters as an economic group would be reduced to almost the vanishing point.*

What most labor does not yet see is that the same principle operates in a

factory. What most labor does not yet see is that the real employer is not "the boss" but the buyer of the product which "the boss" makes and sells. The *real* employer is the consumer. What most labor does not see is that it works for the consumer. If labor, which is the chief cost of the product, is priced too high, and if thereupon the product itself is priced too high, the consumer begins to stop buying it and working people begin to lose jobs in factories, just exactly as our imagined grass cutters lost jobs on lawns.

Labor has to become price-conscious and consumer-conscious. It also has to become production-conscious. There are schools now for the training of labor leaders. Those schools ought to drill our labor leaders of the future into realizing thoroughly and completely that the only road to better working conditions is through production, and that production comes first and higher wages and shorter hours become possibilities afterward.



Labor schools ought to drill our labor leaders to realize that the only road to better working conditions is through increased production.

Possibilities? They become *actualities*. Our advances in productivity have always been followed steadily by improvements in wages and in work hours.

In 1914 the average hourly industrial wage rate was 25 cents. In 1939 it was 64.4 cents.

In 1899 the average industrial work week was 56.8 hours. In 1914 it was 53.1 hours. In 1940 it is 37.5 hours.

Virtually all industrialists are happy to see their men get more income and more leisure. But they know that wages and work hours have now come to a stage in which further improvements in them are possible *for* labor only if there is further productivity *by* labor.

Wise labor leaders would master that unchangeable economic fact. They would realize that they are only swelling the ranks of the unemployed when they make wages so high and hours so short and manufactured products so expensive that the consumers curtail their possible purchases. Wise labor leaders would join with wise industrialists to teach their followers that the true source of their wages is not "capital" but the consuming public. And what is the *ultimate* consuming public? For the most part it is simply *other working people.* From the *ultimate* economic point of view, *working people are really working to sell things to one another.* Management is simply the organism that facilitates this process.

Wise labor leaders, in our judgment, would thereupon adopt the four following policies:

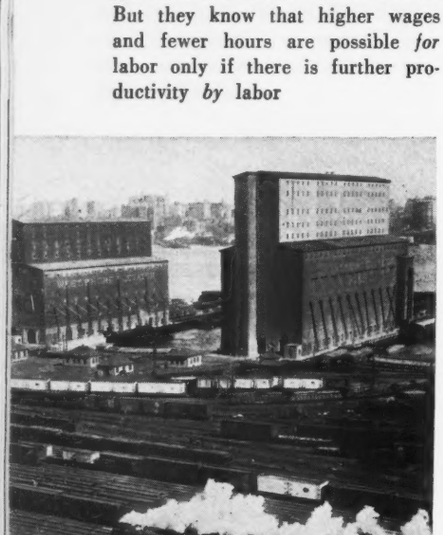
1. They would forget the phantasy called the "30-hour week." In present circumstances the 30-hour week could mean only a drastic reduction in the *total* of wages paid to working people. It would put many firms completely out of business and it would so raise costs and prices as to curtail the sales of almost all of the rest. The very discussion of the 30-hour week is dismaying and discouraging to managements and to investors. It retards industrial development. Wise labor leaders would forget it and urge their followers to forget it.

2. They would go slow right now in demanding wage increases. The *employed* working people of the United States are now at the highest peak of hourly earnings known to human history. To climb above that peak is impossible in most of industry except through *more* and *better* OUTPUT. Wise labor leaders would begin to concentrate on OUTPUT. And therefore:

3. They would approach management and offer all the resources of their

Ewing Galloway

Industrialists want to see their men get more income and more leisure. But they know that higher wages and fewer hours are possible *for* labor only if there is further productivity *by* labor



New York Central System

unions to the improvement of work methods and to the betterment and enlargement of the plant's products. This has already happened in a considerable number of cases, particularly in the garment industry and in the steel industry. It often has resulted in great advantages to both sides. It puts an end to *blitzkrieg* strikes. It also puts an end to the *slow*-down, to the *mental* sit-down, which today diminishes output in thousands of factories. It also develops the union from being a weapon of war into being a tool of work, and it thereby in the end, through more and better work, enables the members of the unions to earn more and better compensation. Wise labor leaders will know that unions are going to disappear unless they *promote*, instead of *hinder*, the economic process. They will therefore cooperate with management. But toward what end? Just more immediate dividends and more immediate wages? No.

4. Labor statesmen will understand the necessity of *lowered prices*. They will cooperate with management to bring prices down. When improved work methods have reduced costs and have made savings possible, labor statesmen will want to cooperate with management in its division of the proceeds equitably among the owners, the employees, *and the customers*. Enlightened labor will remember that wages come from *sales* and it will join management in wanting the *lowered prices* that can enlarge sales, increase purchasing power, and expand the prosperity of the whole American people. Even in economics PATRIOTISM PAYS.

So we come to the duties of government.

Here we have to avoid fanaticism. We have to remember that a considerable amount of government is necessary. There has to be a governmental framework within which society—and business—can safely and successfully operate.

Robbers have to be stopped. Forgers have to be detected and arrested. Deadbeats and gyps have to be forced to pay their bills. Unscrupulous dealers have to be compelled to use true weights and measures. Conscienceless competitors have to be obliged to cease from fraudulent representation of their wares. Public utilities—such as railroads—have to be obliged to serve all customers (especially when they are competitors) on equal terms. A national monetary system has to be maintained; and therefore banks, which deal in money, have to be supervised; and therefore the whole field of credit becomes a field that government has to watch with care.

But why give further illustrations? They would run into hundreds. In a modern society the strands of private enterprise and of governmental regulation are in fact so intimately interlaced that they constitute a sort of seamless web.

But thereupon it is all the more obligatory upon government to see to it that the governmental strands do not ruin the web. Indeed it is thereupon all the more obligatory upon government to see to it that its strands are energetically beneficial to the web. Today, at many points, they are not beneficial, they are harmful.

We suggest that citizens should insist upon it that government should at once initiate the following reforms:

1. Conduct for itself classes on the economic difference between a governmental employee and a private worker. It is true that the governmental employee, from the economic point of view, renders a "service." It may be a necessary service or it may be an unnecessary service but it is a service. It is a service, how-

Ewing Galloway

Above, Treasury employees at work. Every time the government hires an employee, it deprives itself, from the economic point of view, of a customer. Obviously the present government employees are a staggering load on the backs of the private workers

ever, that the private worker supports and which by taxes he is *compelled* to support. He *has* to buy it whether he *wants* to buy it or not. He may not like movies, but if the government decides to manufacture a movie on the theme of fields and ploughs, he has to help pay for that movie even if he hates to look at it. Private workers are *involuntary customers* for government's services.

But every time that the government hires an employee, it deprives itself, from the economic point of view, of a customer. We have some 55,000,000 employable workers. If the government should hire 50,000,000 of them, it then would have only 5,000,000 customers to buy its services and to support its 50,000,000 employees. Obviously, the 5,000,000 could not do it. Obviously, also, the present governmental employees are a staggering load on the backs of the private workers. Government's first present duty is to learn the economic fact that it can make a major contribution to industry and labor and prosperity by diminishing the number of its own employees as drastically as possible. Therefore:

2. Eliminate federal governmental activities that are mere duplicates or extensions of private activities. Many of the government's credit agencies fall into this class. Their work could just as well be done by private institutions under governmental supervision. The private institutions would do what governmental

agencies cannot and do not do. They would make profits and pay taxes. The elimination from the government of functions that are properly private would shrink the government—and its cost—considerably.

3. Consolidate governmental activities that are now duplicated between the federal government and the state governments. Research is one such activity. Agricultural research, for instance, is a chaos of duplications between agencies of the federal government and agencies of the states, such as state universities. Consolidation and coordination in all possible fields between the federal and the state governments would effect large economies.

4. Eliminate the *un*necessary employees who exist numerously even in those parts of the government that are themselves *necessary*. These *un*necessary employees are an inexcusable drain upon the economic system of the nation. The leaders of the political party that won the election of 1932 were loud in saying that the elimination of unnecessary governmental activities plus the elimination throughout the government of unnecessary governmental employees would reduce non-army and non-navy governmental costs by 25 percent. They were right then. They would be righter now. Such eliminations would now save us several billions of dollars a year.

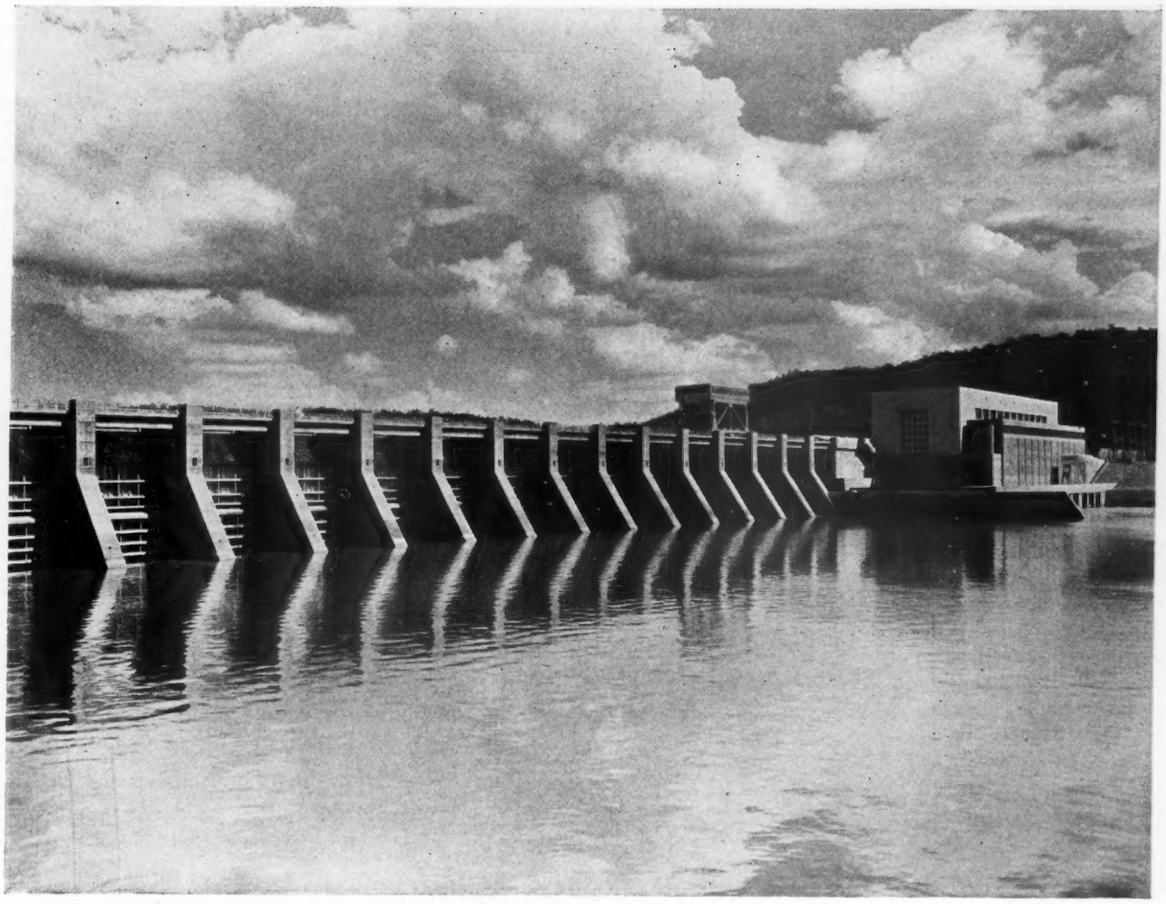
5. Keep borrowing to a minimum. It has become a habit that threatens not only national solvency but also national integrity. There is nothing more disintegrating, morally, than an undue dependence on debt. To save our characters as well as to save our pocketbooks we must make a start toward getting back to a balanced budget and a pay-as-you-go basis for at least our non-war, peace-purpose expenditures.

6. Lay taxes in such a manner as to do the least harm to the productive process. Industry, if it is going to expand, must have new capital. It must get this new capital—why not be frank about it?—from the relatively well-to-do. But if government taxes a rich individual so heavily that it seriously diminishes his surplus funds for new investment, it has impeded industry and prosperity. For the sake of a relatively small amount of revenue for itself, it has crippled the economic process.

Moreover, in the end, it has not benefited even itself; because, through preventing investment, it has prevented the creation of new wealth which could be taxed in the future. From the government's own standpoint, from the standpoint of its own treasury, nothing is more shortsighted than the excessive taxation of investment capital.

And there are many other features of our existing taxation system that are equally unsound. Some taxes bear too heavily on the very poor. Citizens should therefore say to government: Revise and reform the federal taxation system to make it less punitive and more promotive of economic progress.

7. Take the government out of competition with industry. If private capital is going to finance the enlargement of our electric-power plants, it must have confidence that they are not going to be ruined by governmental power plants competing against them with unlimited tax-raised public funds. Moreover, in the course of our present preparedness program, if private capital is to finance the enlargement of shipyards and munitions plants, it must have assurance that these new investments will not be destroyed by new enlarged navy yards and new



If private capital is going to finance the enlargement of our electric-power plants, it must have confidence that they are not going to be ruined by governmental power plants competing against them with unlimited tax-raised public funds

enlarged army arsenals. Government cannot and must not tax industry to operate govermental plants to bankrupt industry.

8. Improve the government's personnel, especially in the regulatory agencies. Some of our regulatory laws need to be amended and improved, but most of them would be perfectly bearable if only they were enforced by able, experienced, impartial, non-partisan, non-fanatical men. We need a new race of better administrators in Washington. Most of the regulatory laws are going to stay on the statute books, no matter which political party is elected in November. What we need, therefore, is a movement to get rid of amateur, crackpot administrators and to train a great body of competent civil servants who will administer the regulatory laws without persecution of honest citizens and without special fear or special favor for any citizen group. Nothing could be more important governmentally for the country than such an improvement of governmental personnel.

9. This last point may be difficult but we believe it to be feasible. Shift the emphasis throughout the government from merely *regulating* industry to also *energizing* it. In some parts of the government this revolution is already accom-

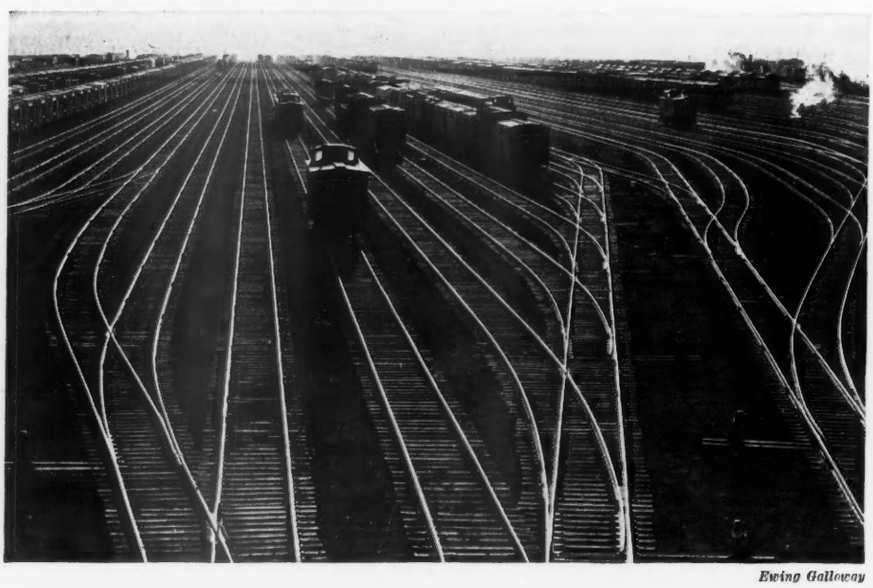
Wide World

The objective of the Civil Aeronautics Authority is not merely to regulate the airplane industry but also to accelerate its development in every possible way. The same objective should exist in all other government regulatory agencies

plished. The objective of the Civil Aeronautics Authority is not merely to regulate the airplane industry but to accelerate its development. The same objective should exist in all other governmental regulatory agencies. The Interstate Commerce Commission, for instance, should be interested not only in making the railroads obey its regulatory orders but also in helping the railroads to find the gigantic sums of money necessary for their modernization; and the Securities and Exchange Commission should be interested not only in preventing misdeeds in the investment market but also in making the investment market broader and stronger and more active. Government does not need to be only a negative force toward industry. It can contribute help that will be positive.

Government, then, and industry and labor can all make contributions to

The Interstate Commerce Commission should be interested not only in making the railroads obey its regulatory orders, but also in helping the railroads to find the gigantic sums of money necessary for their modernization



Ewing Galloway

economic progress. They can all help to reduce the country's costs. They can all help to reduce prices. They can all help to accelerate and to diffuse prosperity.

And when they begin to do these things *jointly*, when they begin to do them not as mutual enemies but as mutual friends and collaborators, then indeed these things will be forwarded at a speed not only equal to our best in the past but far, *far* beyond it.

And what better preparation could there be for national military preparedness? You cannot really have a united people for the *work* that will produce the weapons of military preparedness unless you first have a united people for *work in general.* You cannot split the idea of work up into *united* work on a bolt and nut that is going into a gun carriage and *quarrelsome wrangling* work on a bolt and nut that is going into a motor car or a bridge. The country needs unity, concerted unity, for *all its work.*

We have now considered how well America lives, how well it could live if costs and prices were lowered, how it is confronted with misunderstandings, and how these misunderstandings should give way to cooperations. We conclude with a guess. It is only a guess, but it is based on numerous detailed inquiries by industrialists and industrial engineers. It is this:

With industry and labor and government all doing their best toward the common cause, our costs in this country could be brought down 35 percent.

The consequent reduction in prices would create a purchasing power that would make this country so prosperous and so strong that it could face the world's troubles with complete composure and with perfect confidence in American invincibility.

Is it not worth the effort?

Ewing Galloway

Service • Sacrifice • Success

Perhaps we ought to summarize a bit. Perhaps we ought to say a word or two that goes a bit beyond economics. Perhaps the world always has to have economics *plus* something or other. Economics plus—shall we say—vision?

America, we think, should have three visions.

1. The route for America toward its future is *free* enterprise conducted in the *public* interest. It is not only government that has a public national duty. It is also industry. It is also labor. All three must be directed by the star of *service.*

2. All three must be ready to *sacrifice.* They must be ready to sacrifice the immediate to the ultimate. Industry must be willing to sacrifice immediate profits to the ultimate immensely greater profits that can and will come from lower prices and larger sales. Labor must be willing to sacrifice immediate improvements in hours and wages in order to get the ultimate immensely greater improvements that can come from broadened and heightened productivity. Government must be willing to sacrifice immediate revenue in order to get the ultimate immensely greater revenue that will come from greater investment and greater wealth to tax. All three must *serve and sacrifice.*

3. The goal, the *sure* goal, is *success.* The goal that we then are bound to reach is an America in which every citizen enjoys *security* and enjoys *being alive* in America, and is thereupon ready, automatically, to *defend* the America that has brought him these blessings.

Service, Sacrifice, Success. It is the ladder out of the abyss, the only ladder.

Service and Sacrifice will be called for in making ready to defend America. Service and Sacrifice will result in Success

Ewing Galloway

Why America lives as well as it does today

Why is it that America, with such a small part of the world's area, and with such a small part of the world's population, lives so well in comparison with other areas and other populations?

Why does it have such an *undue* proportion of the world's physical equipment? Why does it have such an *undue* proportion of the world's savings? Why does it have such an *undue* proportion of the world's cultural achievements?

The answer is *power*, and the *power-driven machine.*

Primitive people had really no machines at all. Our colonial Ameri-

can ancestors had few. Most of the population was tied to the land. Almost everybody had to work in the fields to supply the nation's food.

Then came the first power machines in the first factories. They started to make agricultural tools, transportation equipment (wagons, buggies), and personal attire (garments, shoes, hats), with an ease and a celerity and a *cheapness* never before known.

The prices of these things went down. The sales of them went up. The total of the money received for them by the factories thereupon went up also. Thereupon the wages of the factory workers went up too. And their hours of work began to go down.

What wonder worked this miracle? The *power-driven machine.*

It went further. Its surplus funds enabled us to do *researching.* This researching resulted in new ideas and new products and new industries utterly unknown to our ancestors, all the way from the first ticking telegraph to the ocean-crossing airplane.

But did these new industries diminish employment in the old ones? Almost invariably they did *not.* What diminishes employment is erroneous and vicious policies by the human beings who compose industry, labor, government. The *power-driven machine* is forever increasing employment.

It is forever increasing it to provide not only the necessaries but also the comforts, the luxuries, the material and mental and spiritual benefits and advancements which the American people increasingly enjoy—and will some day *totally* enjoy.

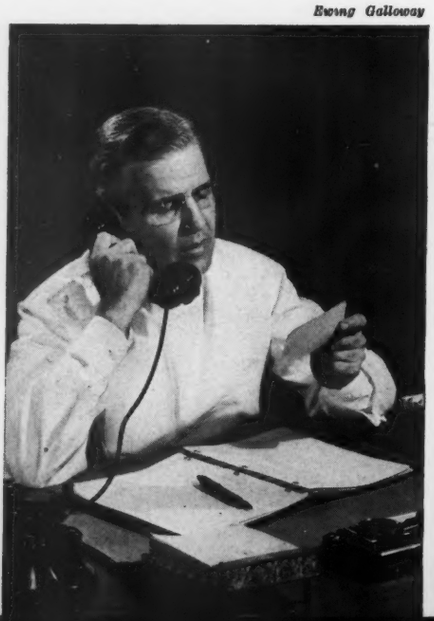
Because of the machine we need a smaller and smaller *proportion* of our people on the land for purposes of *food.* Because of the machine we are now beginning, actually, to need a smaller *proportion* of our people at the benches in our factories. We are able now, increasingly, to afford to employ more explorers, more doctors, more dentists, more gardeners, more cooks and maids, more garage mechanics, more filling station attendants—in a word, or in *three* words, more *professional* people, more *artists,* and more *service* people.

The following pages tell realistically why America lives as well as it does today.

The things America has are the things Americans are preparing to defend. The freest people in the world will guard the highest standard of living in the world. By protecting physical America they will protect spiritual and economic America

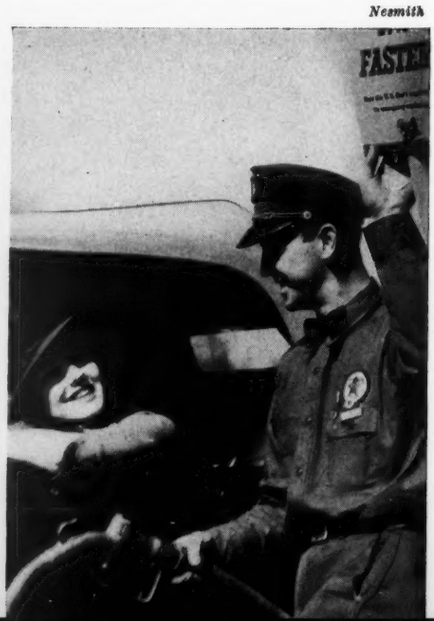
When America was new, almost everybody had to work in the fields—just to supply the nation with enough food. Today, because of the machine, we are able to let more and more people devote their time to the professions, the arts, and services

Ewing Galloway



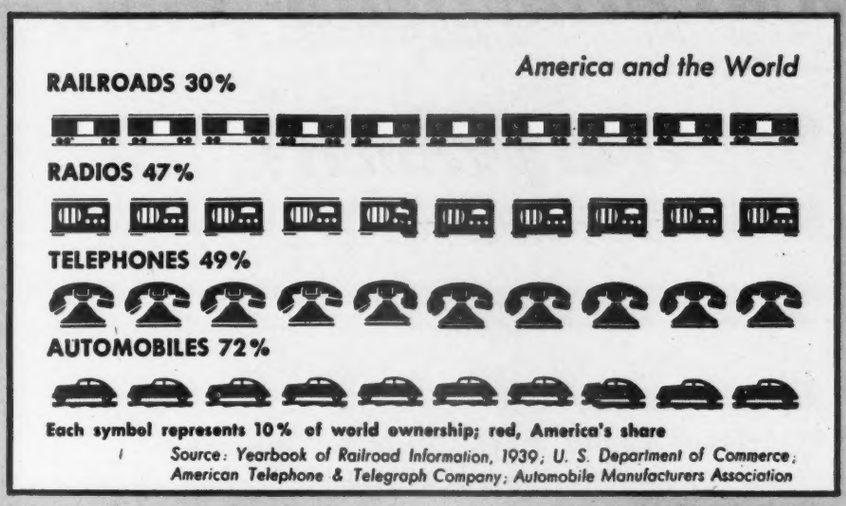
Culver Service

Neamith



★ America leads in transportation and communication

With only 5 percent of the world's area and 6 percent of its population, Americans operate 30 percent of the world's railroads, own 47 percent of its radios, use 49 percent of its telephones, and drive 72 percent of all its automobiles

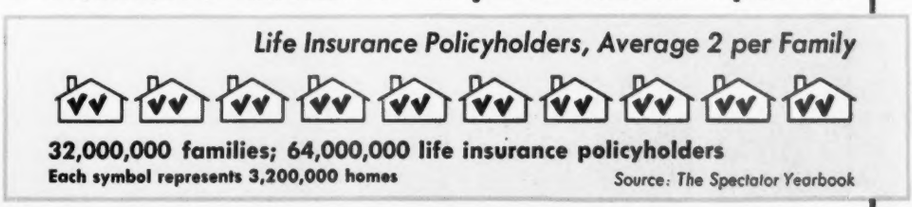

America and the World
RAILROADS 30%
RADIOS 47%
TELEPHONES 49%
AUTOMOBILES 72%
Each symbol represents 10% of world ownership; red, America's share
Source: Yearbook of Railroad Information, 1939; U. S. Department of Commerce; American Telephone & Telegraph Company; Automobile Manufacturers Association

How Well Do Americans Live?

★ Nearly half of America's families own homes

Of America's 32,000,000 families, some 14,000,000 own their own homes. In America there is an average of two life insurance policies and 1½ savings accounts to every family

★ 64,000,000 Americans carry life insurance policies


Life Insurance Policyholders, Average 2 per Family
32,000,000 families; 64,000,000 life insurance policyholders
Each symbol represents 3,200,000 homes
Source: The Spectator Yearbook

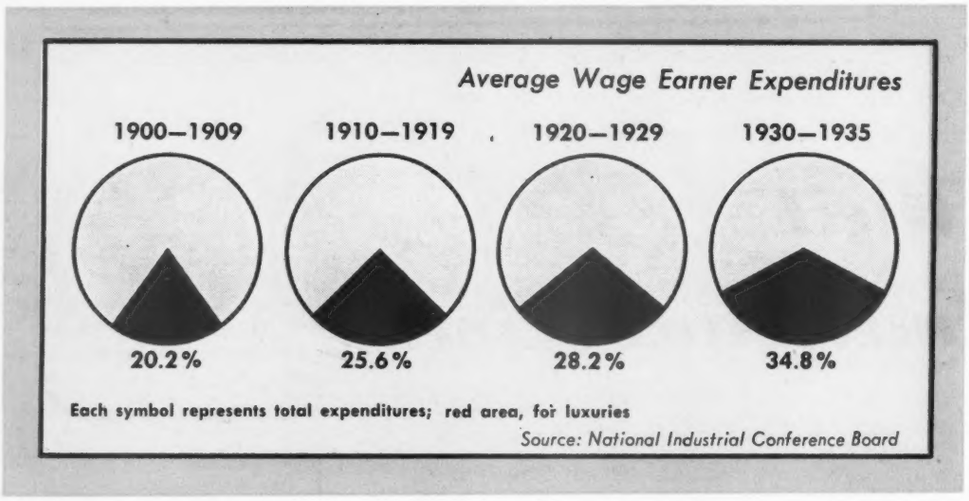
★ Americans have 45,000,000 savings accounts

Savings Accounts, Average 1½ per Family
32,000,000 families; 45,000,000 savings accounts
Each symbol represents 3,200,000 homes
Source: American Bankers Association

Here and on the next page are symbolized some of the things America will defend: The nation's physical equipment, as represented by transportation and communication facilities. The standard of living, as represented by home ownership, widespread possession of insurance policies and savings accounts, high wages, low prices

Has American Living Improved?

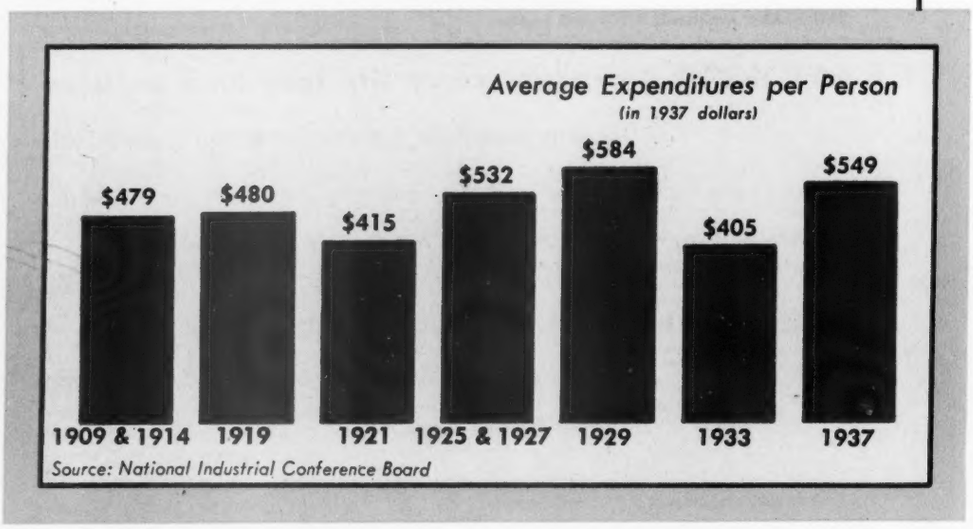
★ Americans spend more today for luxuries



In the early 1900's the average wage earner had to spend four-fifths of his income for necessities. Today he buys the same necessities, has 35 percent left for other things

★ Living standards are higher today

Back around 1910 America spent 28 billions a year for its living. In 1937 money, because of the change in the value of the dollar, this sum represents 45 billions. Total expenditure for living in 1937 was 71 billions. Thus expenditure per person rose from $479 to $549. The extra $70 per person was spent largely for new goods and new services that could not be had before the war



★ An hour's work buys more today

Prices in Hours of Work, Average Factory Wage Earner

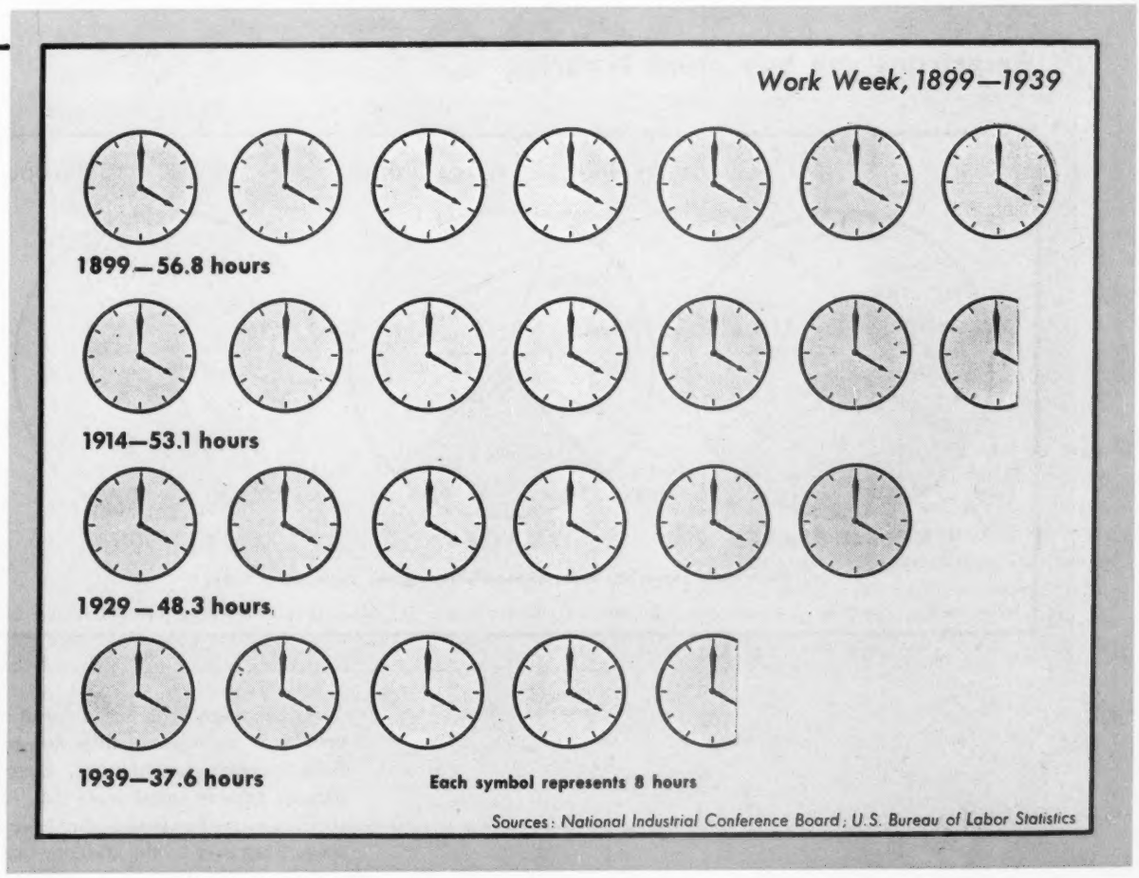
	Felt Hat	Work Shoes	Bedroom Suite	Baby Carriage	Set of Dishes	Light Bulb	Auto	Bicycle
1914	11.5	9.3	104.3	41.0	40.0	1.7	4,514.2	75.5
1938	3.2	3.3	65.4	15.7	14.5	0.2	1,098.2	40.2

Source: Machinery & Allied Products Institute

It takes fewer and fewer hours' work of a factory wage earner to buy food, shelter, clothing, and luxuries. A year's supply of clothing, for example, which cost the average wage earner 708.5 hours of work in 1914, cost him only 304.6 hours in 1938

★ Americans work fewer hours today

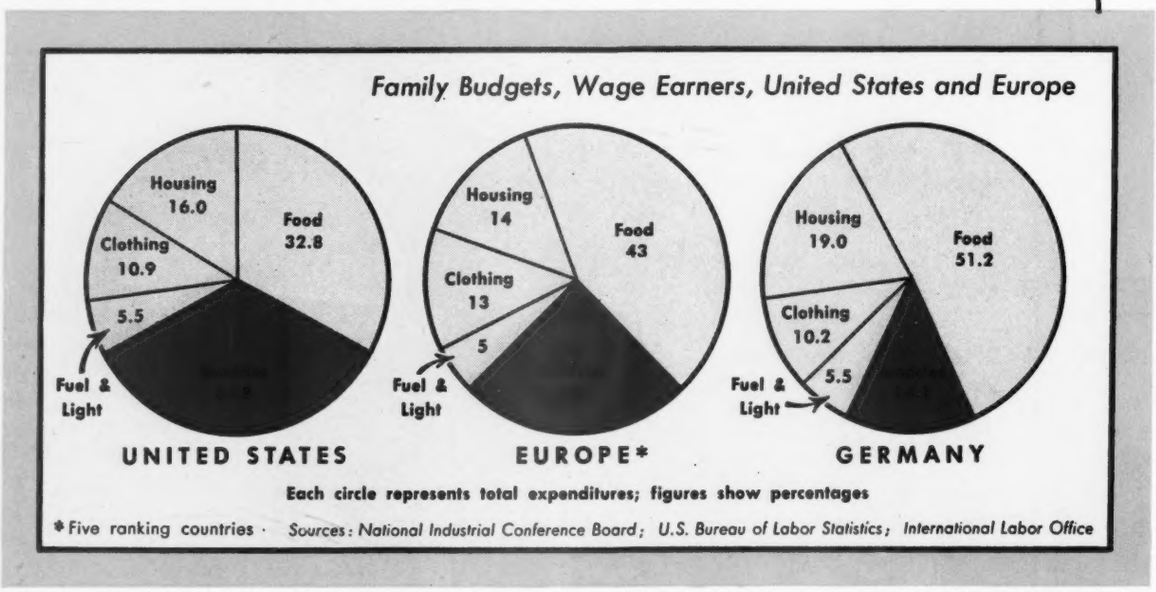
American wage earners in 1899 worked an average of 56.8 hours a week. They worked only 37.6 hours in 1939—a decrease of 34 percent in 40 years. Americans have more of the good things of life than they used to have, and do not work so long to get them



Adequate preparation for defense will make necessary increasing the work week. That will be a part of the cost of protecting America. It will be paid willingly, in order that Americans shall not give up forever their right to decreasing hours of work as productive ability increases

Do Americans Live Better Than Europeans?

★ **Americans can buy more luxuries**

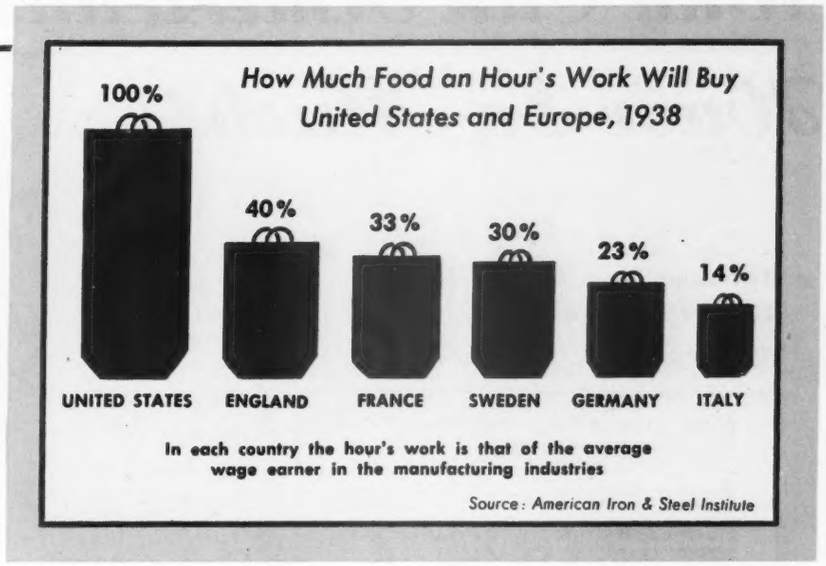


American wage earners can spend more than one-third, Europeans only one-quarter, of their incomes for luxuries. German wage earners have to spend more than one-half of their incomes for food alone, have only one-seventh left over for the all-important sundries

It is in order to continue their bigger budgets, their higher wages, their greater purchasing power, that Americans now are engaged upon the greatest defense undertaking in their history

★Americans get more food for their work

Every wage earner has to eat. We can therefore judge living standards by the amounts of food that wage earners can buy with an hour's work. England, we find, has the best record among European countries. But even there the average wage earner can buy only 40 percent as much as the American wage earner can. And this percentage scales down in other European countries to Germany's 23 and Italy's 14

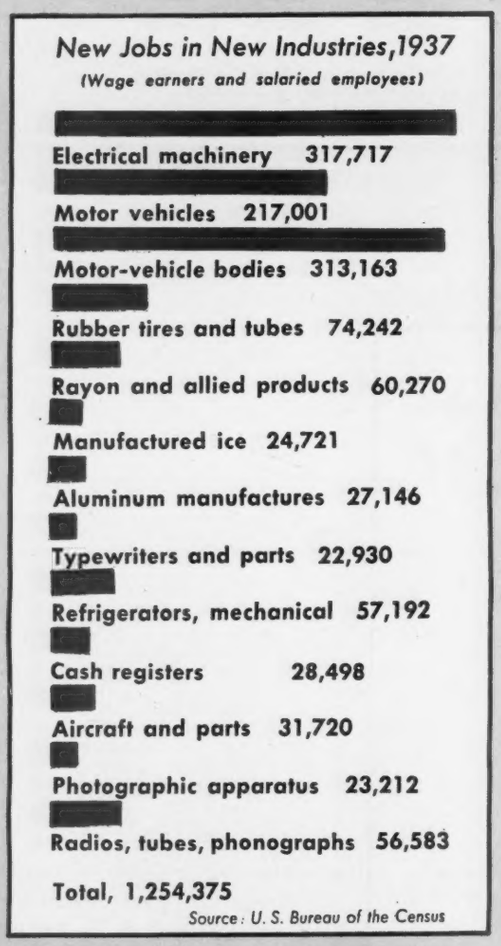


★ American wage rates are higher

There are steel mills in every country, so steel-workers' wages provide a useful yardstick for comparing American living standards with those of other countries. They range from an average of 84 cents an hour in America to 35 cents in Germany, 16 cents in Italy, and 9½ cents in Japan

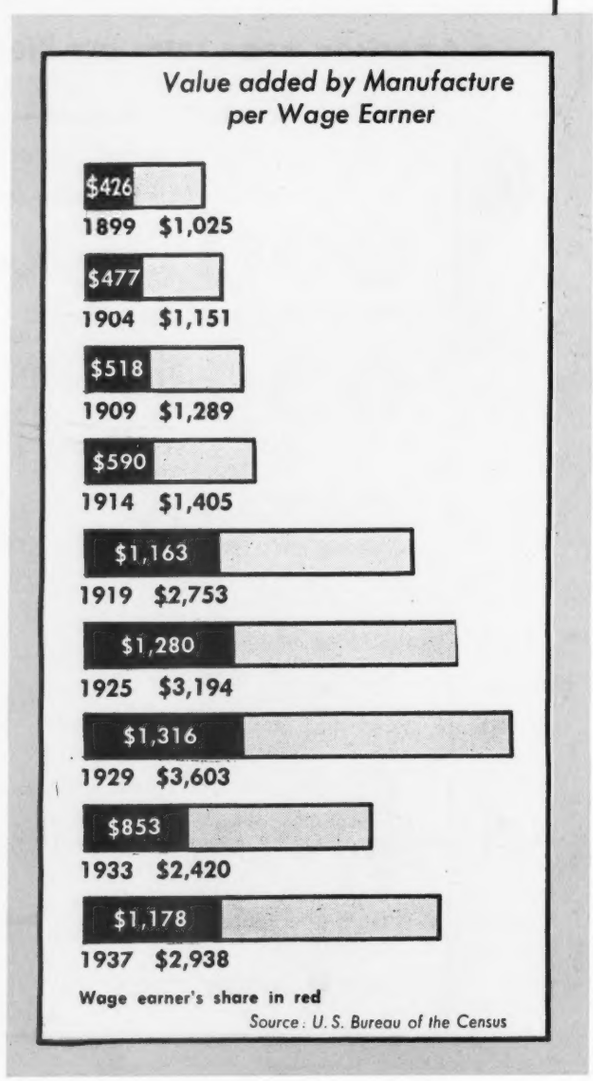
Why Can Americans Have So Much?

★ Because new industries create new jobs



Fourteen new industries — all developed during the period of greatest mechanization — have provided new jobs for more than 1,250,000 wage earners and salaried employees

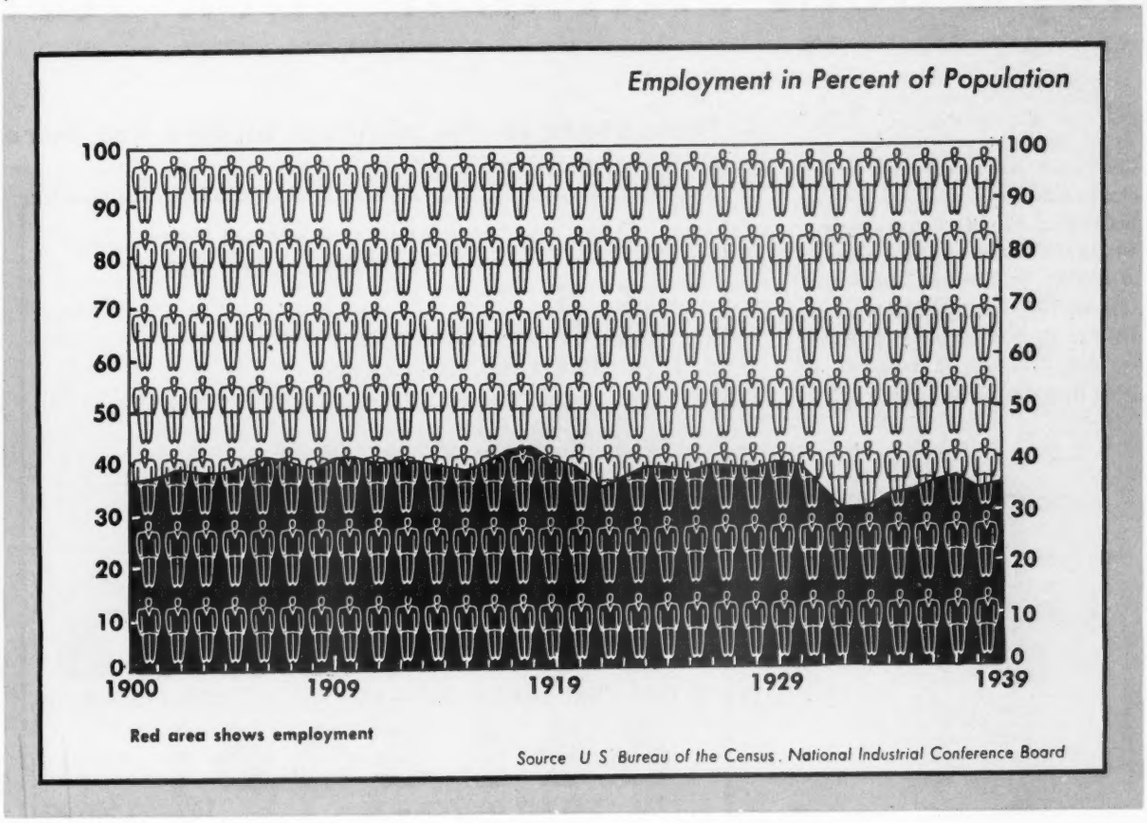
★ Because output per man is up



As the use of power increases, each wage earner adds value to more and more materials. And, since wage earners are paid out of total value added to the materials they work on, their annual incomes have increased

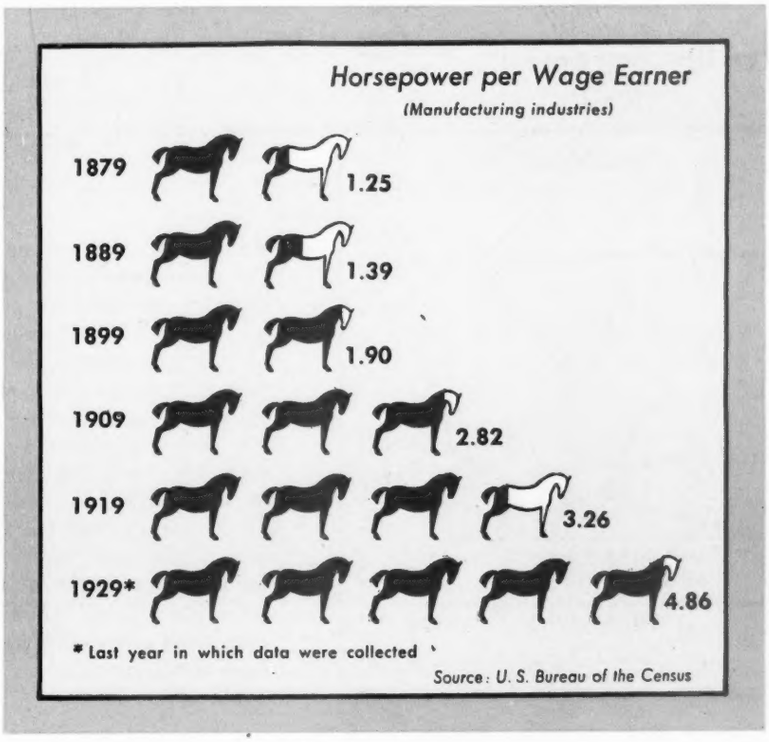
America, in her preparation for defense, is assuring the freedom under which output and wages have gone up together, and research has continuously created new industries with new jobs

★ Because most of the time jobs kept pace with population



Until "the great depression" jobs kept pace with population. There were some ups and downs, but up to 1930 the percentage of people with jobs to total population was always right around 38. When industry again operates under the right conditions of free enterprise, jobs will again keep pace with population

★ Because the use of power has increased

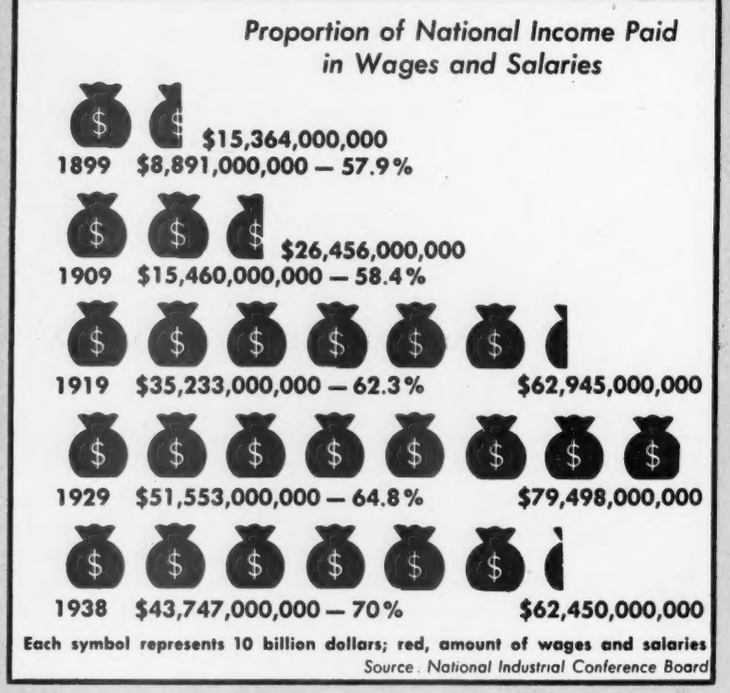


Horsepower per factory worker has increased – from 1.25 in 1879 to 4.86 in 1929, the last year for which our government collected the data. The figure is unquestionably higher today. Compare with 2.61 for Germany, 2.56 for Great Britain, 2.14 for Italy, and only 1.78 for France

How Has Mechanization Helped

★ Their share in the national income has increased

Constantly increasing use of machines has raised national income better than 300 percent in the past 40 years. That part of the national income paid out in wages and salaries rose from 57.9 percent in 1899 to 70 percent in 1938. Wage earners in factories received at least their fair share



★ Their purchasing power has increased

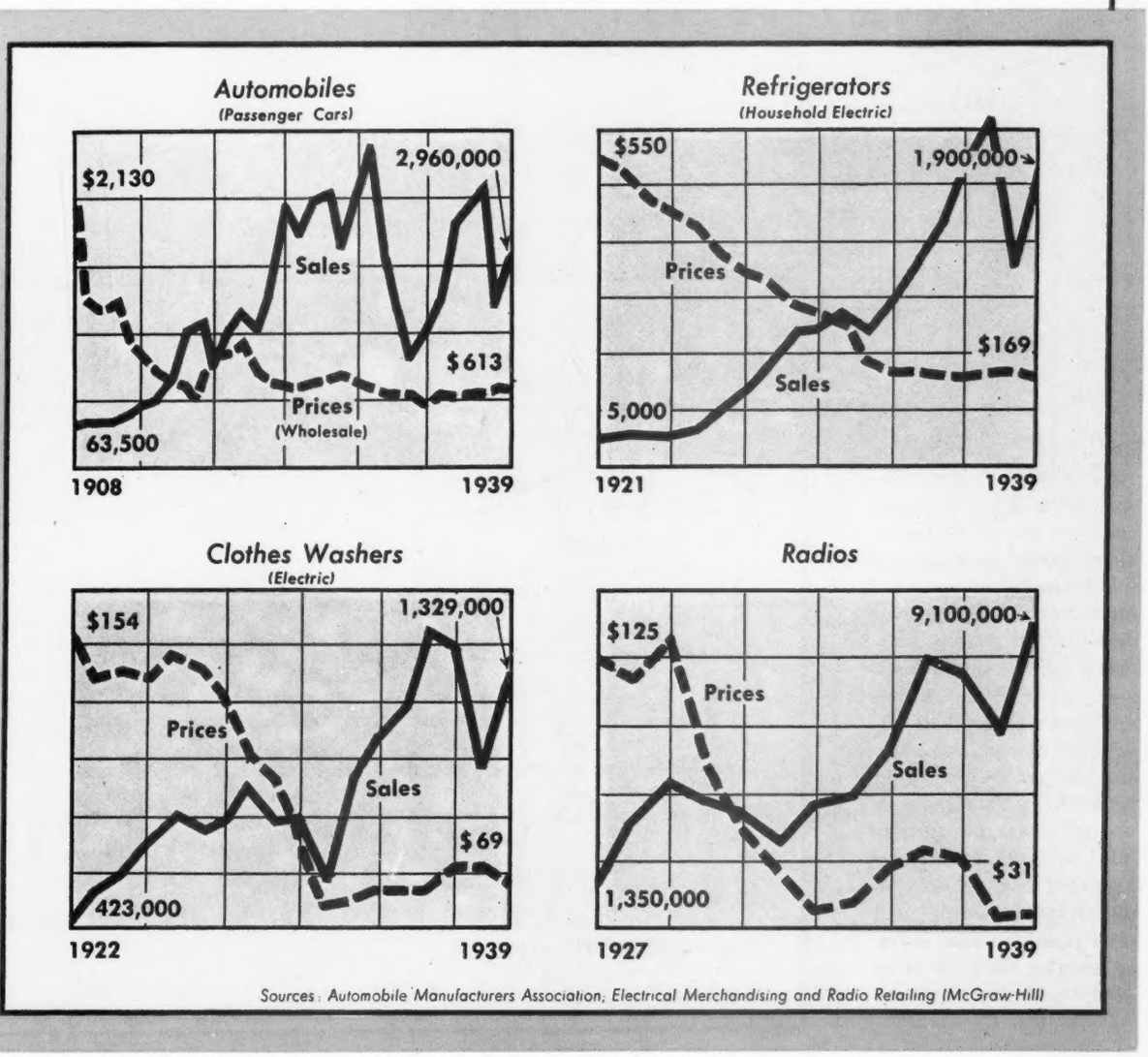
Wage rates have gone up—133 percent since 1914. Cost of living has gone up, too, but not nearly so fast, largely because of industry's ability to produce its goods at lower and lower costs. Net result has been a 60 percent increase in purchasing power of wage rates (often called "real" wages). Had the figures in the chart been confined to wage earners in factories, the increase shown in purchasing power would have been even higher

The American way means freedom for the American people to produce more and more that the American people may have more and more. It is to protect the American way that the huge defense program is undertaken. The American way is built upon mechanization

Employees in Factories?

Even at wartime wages few wage earners could buy cars; they cost too much. Similarly, few wage earners could buy electric refrigerators, washing machines, and radios when they first appeared. But today, through mechanization, costs are down. So are prices. Hence more sales, to wage earners and other gainfully employed

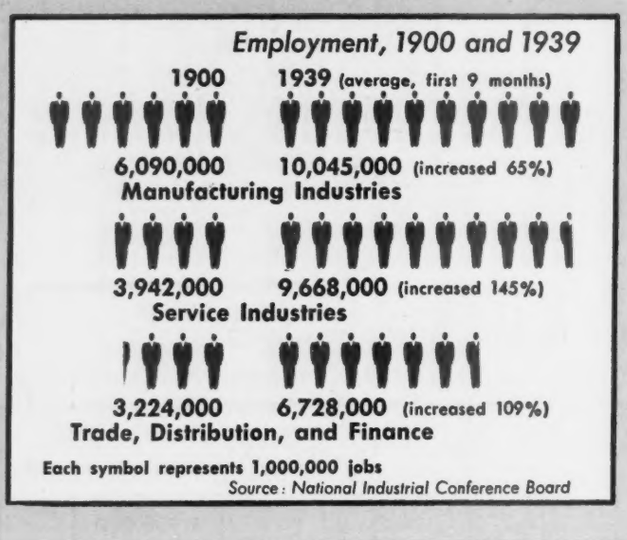
★ They have been able to buy more of industry's products



Sources: Automobile Manufacturers Association; Electrical Merchandising and Radio Retailing (McGraw-Hill)

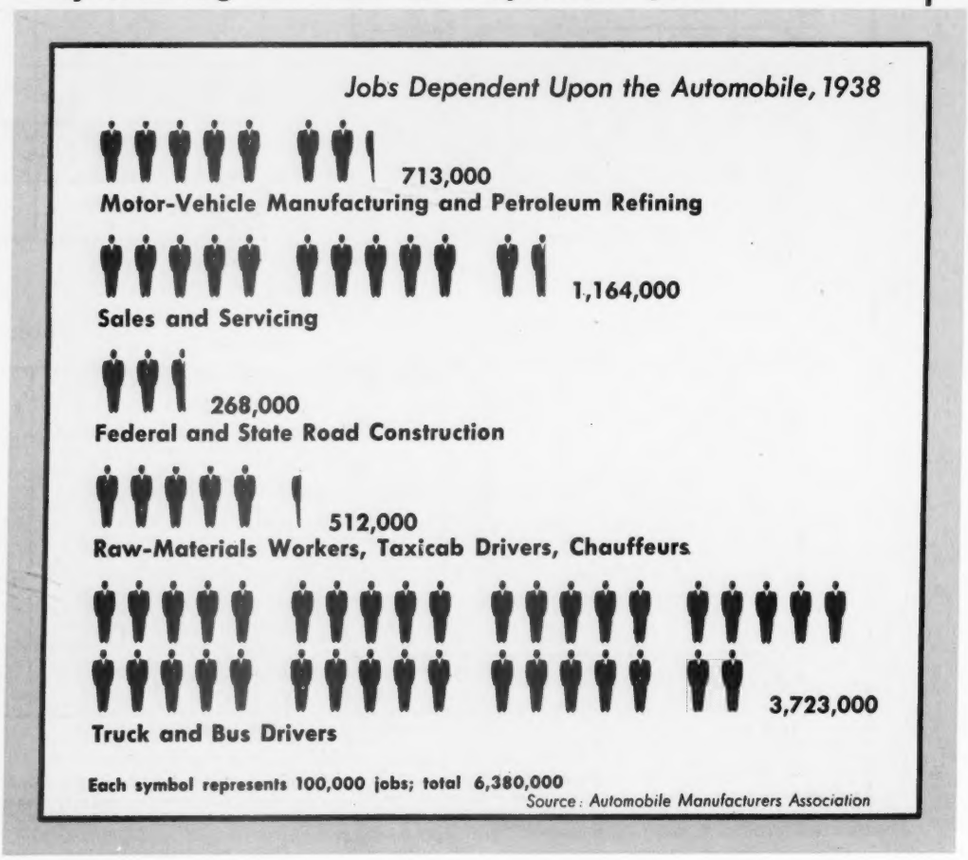
How Has Mechanization Benefited Other Jobholders?

★ **By making other kinds of jobs necessary**



★ **By creating the need for dependent jobs**

Every industry creates many jobs outside its plants. The automotive industry, to cite one that everybody knows about, makes some 700,000 jobs in factories—motor vehicle, body, parts, tire industries, and petroleum refining. But add up the thousands of people who sell and service cars, build roads, drive trucks and taxicabs, and you get the surprising total of 6,380,000 whose jobs depend upon the automobile. It never could have happened had not this industry, by mechanizing, cut costs year after year, thereby lowering the price of its products to the consumer



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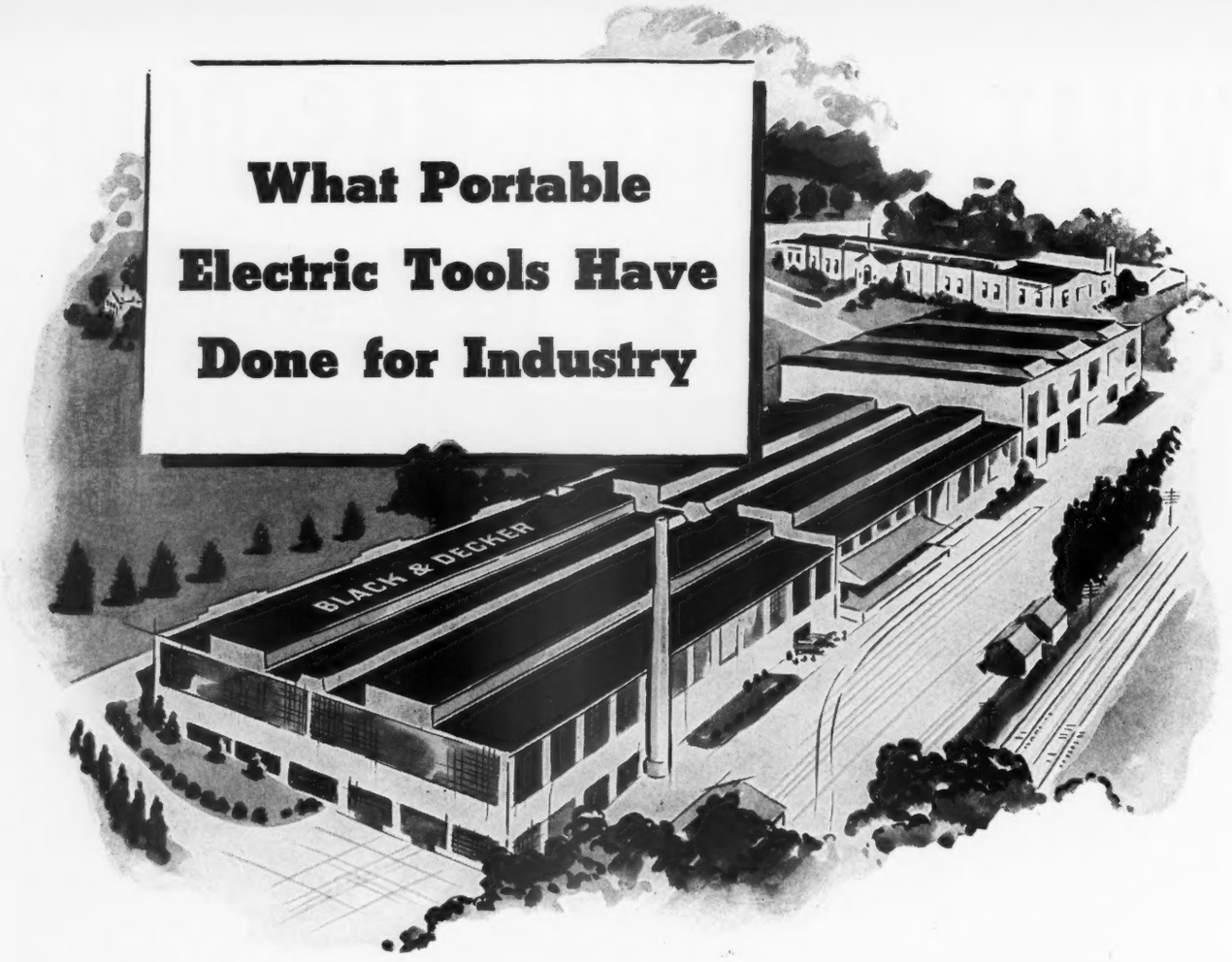
What Portable Electric Tools Have Done for Industry



"What Industry Has Done for America" traces, in no small way, to the development of portable electric tools—to the application of fast, efficient electric energy to slow, laborious tasks which formerly required fatiguing muscular effort. On production lines, on maintenance work, and in servicing the products of industry, portable electric tools have played an indispensable part—eliminating toil and strain, and making a contribution of inestimable worth to industry and to America.

By helping improve production methods and reduce manufacturing costs, portable electric tools have helped industry bring greater benefits to the American people, elevate living standards, and enable a greater segment of our people to own automobiles, radios, electric refrigerators, washers, ironers, and dozens of other conveniences which bring a keener enjoyment of living.

THE LENGTHENED SHADOW OF TWO MEN

It is said that every great business is the lengthened shadow of a man. The portable electric tool business is, in a large measure, the lengthened shadow of two men. Throughout industry today, the words "portable electric tools" and "Black and Decker" are virtually synonymous. Throughout industry, The Black & Decker Manufacturing Company—today the world's largest manufacturer of portable electric tools—is recognized as the pioneer of many of the developments which have built for portable electric tools both a steadily expanding field of usefulness and steadily increasing operating efficiency.

Back in 1910, S. Duncan Black and Alonzo G. Decker were youngsters in their twenties, working as engineers for a firm making electrical and mechanical equipment. With inherent American ambition, they decided to go into business for themselves. They started, on a shoestring, but with a vision—the vision that some day electric power tools would speed production and maintenance work, reduce strain and fatigue, and help good mechanics in every craft do better work.

PIONEERING THE UNIVERSAL MOTOR

Their first "plant" was rented warehouse space in Baltimore, where they started out by making machinery on special order. Between orders they developed a portable electric drill, powered by a Universal motor—a radical departure in motor design for those days. That Universal motor was highly important. In fact, Black & Decker's pioneering of the Universal motor was the fountain-head from which has sprung the world-wide acceptance and use of portable electric tools that we know today.

Grasping the potential importance of the automotive field, Black & Decker first offered the new portable electric drill to garages. Widespread demand grew

quickly, not only because of the high efficiency of the drill but because its Universal motor permitted it to be used on any type of electric current. That drill also introduced a feature which helps account for its prompt acceptance. It was the first drill with the now world-famous "*pistol grip and trigger switch*"—another B. & D. innovation.

From the testing ground of hundreds of garages, it was a short step to the automobile industry itself. Soon Black & Decker's new drills were in use on automobile production lines, and in plants representing dozens of other important industries.

PIONEERING IN JOBBER DISTRIBUTION

Black & Decker realized early that their competitors' method of selling tools directly to users, and the consequent low volume, high costs and slow growth, blocked the way to widespread general use of portable electric tools. The small garage, the neighborhood carpenter, the plumbing and heating shop, the electric shop and dozens of similar small businesses had no nearby source of supply where they could see and buy these new tools—and prices were too high.

Here again the Universal motor was highly important. That motor made it possible for Black & Decker to pioneer the policy (adhered to ever since) of selling exclusively through distributors. Because Black & Decker tools would operate from any A. C. or D. C. electric outlet, it was entirely practical for jobbers to carry them in stock, and thus place them within easy access of any man who could use them. This new and revolutionary policy of distributing electric tools through jobbers increased sales and lowered prices. Shops which previously could not afford the tools, now could buy them from their local supply houses.

PIONEERING NEW TOOLS FOR NEW USES

Encouraged by the successful introduction of their first electric drill, Black & Decker began introducing portable electric tools for many other operations which formerly required slow, arduous hand work. Drills of other sizes and capacities, electric tappers, screw drivers and nut runners, bench and portable grinders, electric saws, hammers, sanders, shears and many others, were added to the line. Today Black & Decker makes 125 different portable electric tools, which drive hundreds of different attachments and accessories, to lighten work in small shops and speed the output of big industry.

The tools themselves have been constantly improved, and many new and increased efficiency features added. More powerful motors have been developed. Through improved design and materials, tools have been made smaller and lighter, yet more rugged and longer lived. At the same time, prices have moved steadily downward.

To illustrate: Black & Decker's earliest ½-inch portable electric drill weighed 21½ pounds and sold for $100.00. The 1940 model of the same drill, a vastly superior tool in every way, weighs only 10¾ pounds and sells for only $53.00. For lighter, intermittent work, a ½-inch Junior Drill, weighing only 9⅛ pounds, is only $35.00.

PIONEERING IN TOOL MAINTENANCE

The large and steadily expanding use of Black & Decker tools throughout America made it possible for the Company to pioneer in another field of usefulness to industry. Electric tools, like all other mechanical devices, occasionally need repairs, new parts or overhauling—yet industrial users cannot afford the delays involved in sending tools back to the factory for servicing, or the uncertainties of repairs made by inexperienced hands.

To meet this need, Black & Decker has set up a coast-to-coast chain of 25 factory-manned service branches, so that Black & Decker tools can be kept on the job with a minimum of "time out" for servicing. These factory branch stations—the only such complete facilities in the electric tool industry—place factory service and genuine factory parts within quick reach of every industrial tool user.

PIONEERING BUILDS PAYROLLS

In its own Company operation, Black & Decker has played an important, direct part in American industry. It has grown to a widespread organization with two plants—twenty-five factory branches. Its employees have distributed into the channels of industry an annual payroll of over $1,570,000, and the Company has assumed its share of Federal, State and local taxes, paying in the past year over $193,000 for the support of these activities.

In addition, Black & Decker has distributed millions of dollars in industry for purchases of materials—a considerable portion of which has been passed on to workers in material plants and mines. Likewise, the Company has helped to create business for distributors and jobbers, and employment for their thousands of salesmen, office and other workers.

PIONEERING—THE AMERICAN WAY

This year the Black & Decker Manufacturing Company is celebrating its Thirtieth Anniversary. The same two men who founded it, S. Duncan Black and Alonzo G. Decker, are still President and Vice-President respectively, actively directing the affairs of the world-wide organization. Under their leadership the Company will continue to develop, manufacture and sell newer, more efficient and lower-priced tools. It will carry on its research covering the application of portable electric tools to more and more branches of industry, so that they will expand to every phase of industrial use and into every type of small shop throughout the world.

What Black & Decker and other progressive businesses have done is possible only under our American system of private enterprise. No other system ever devised by man has inspired so many inventions, created so many industries, with their payrolls, fostered so many businesses, done so much to advance agriculture, or contributed so much to the general welfare of a nation, as has the American system of free enterprise.

THE BLACK & DECKER MFG. CO., TOWSON, MD.

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The same identical charts which in this magazine tell such a graphic story of "What Industry Can Do For America" have been enlarged to poster size (31 inches deep) and printed in colors and are now available for display purposes.

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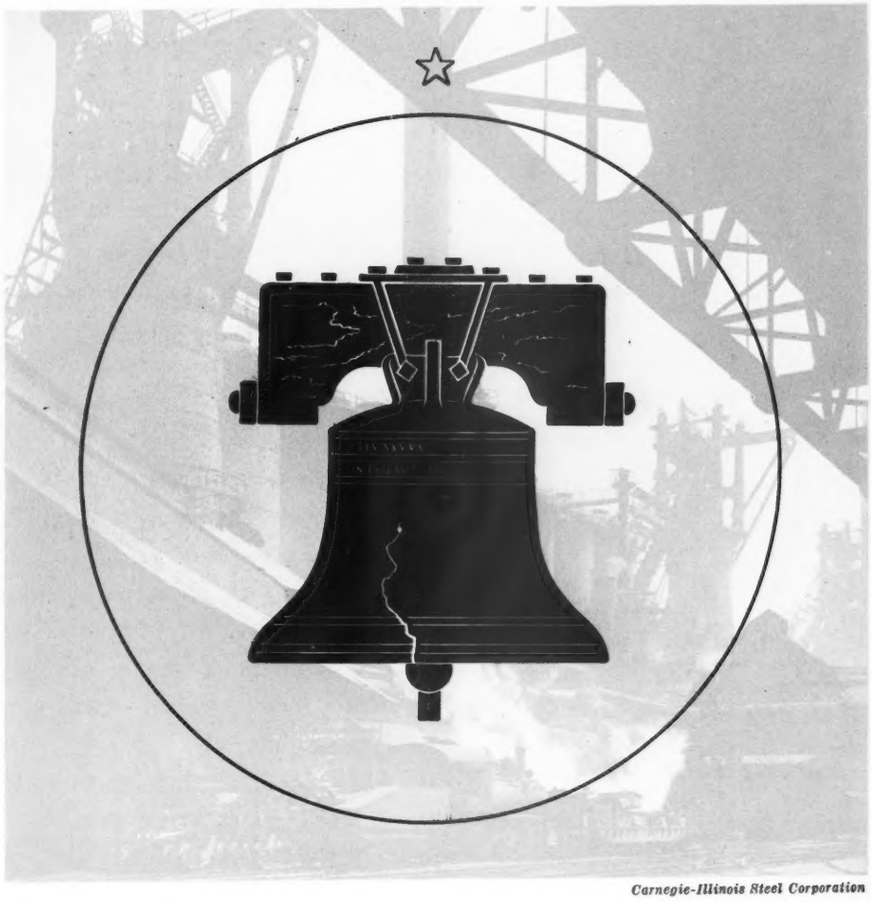


Carnegie-Illinois Steel Corporation

Why America could live much better

America has prodigious natural resources. It is unusually rich in coal, oil, iron ore, copper, and other metals and minerals. It has vast stretches of fertile soil. It has extensive forests. It has magnificent coastal harbors, great inland lakes, tremendous systems of navigable streams.

Out of these natural resources, by energy and skill, and with the help of a relatively small addition of materials from abroad, America has built the world's most elaborate and effective industrial plant. We now have nature's gifts plus a man-made plant of unapproached size and of unexcelled quality. In the course of building and operating that plant we

have developed three mental possessions now more valuable to us than the plant itself. They are:

1. The technique of research.
2. The technique of production management.
3. The technique of individual mechanical skill.

Our research scientists, our production organizers, our skilled artisans, are today able to take our natural resources and our industrial plant and lift them to new levels of greater and greater achievement.

The end sought is plenty for everyone. We have sometimes seemed to come in sight of that end. But we have never reached it. We cannot be content till we *do* reach it.

To provide that every American may always live in good quarters, there is a big market ahead for new and replacement housing.

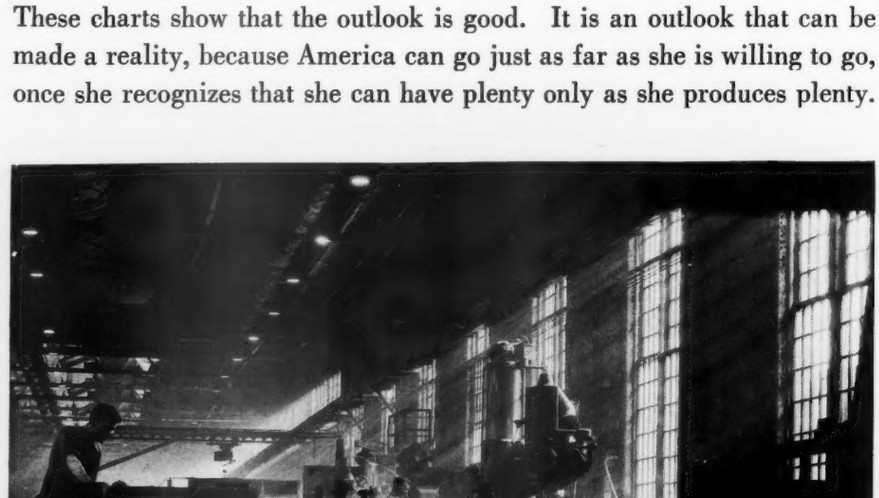
To provide that every American shall go and come as he pleases, by railroad, by highway, or by air, there is a big market ahead in transportation equipment and highways.

To make comfortable the living of all Americans, there are other big markets—in electrification, in electrical appliances, in central heating, in air conditioning, in foods.

To insure the economical manufacture of these things that are essential parts of good living, there must be a big market ahead for capital goods.

In the following pages some of these markets ahead are charted. These charts show that the outlook is good. It is an outlook that can be made a reality, because America can go just as far as she is willing to go, once she recognizes that she can have plenty only as she produces plenty.

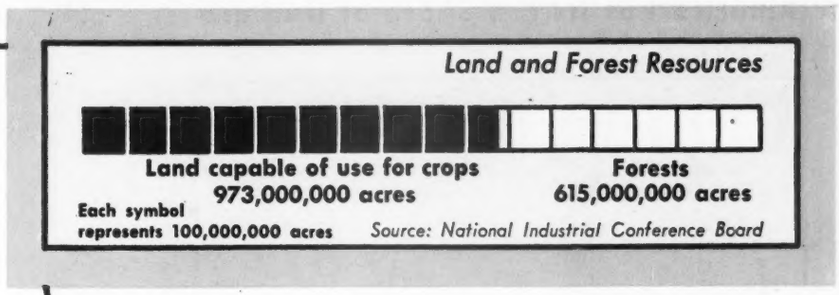
America's natural resources, plus the research, management ability, and skill of her people combine to form the American way, which works toward always raising the standard of living for everyone. In preparing to defend these things — both tangibles and intangibles—America is taking steps to insure the better future living of Americans



Ewing Galloway

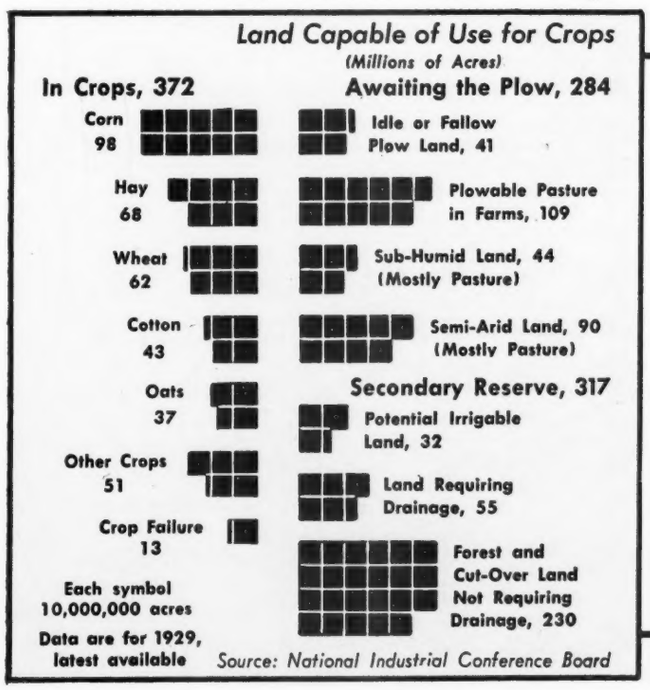
What Are America's Land and Forest Assets?

★ America has vast land and forest reserves



Most of America's soil is productive in one way or another. Half of her acres are capable of use for crops; on them can be produced far more food than her 132 million people can consume. America's forests cover an area greater than that of Germany, France, Spain, Italy, Norway, and Sweden combined (before the war)

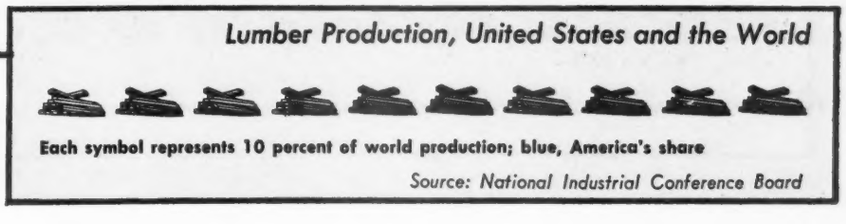
☆ America could double land in crops


Land Capable of Use for Crops
(Millions of Acres)
In Crops, 372
Corn 98
Hay 68
Wheat 62
Cotton 43
Oats 37
Other Crops 51
Crop Failure 13
Each symbol 10,000,000 acres
Data are for 1929, latest available
Awaiting the Plow, 284
Idle or Fallow Plow Land, 41
Plowable Pasture in Farms, 109
Sub-Humid Land, 44 (Mostly Pasture)
Semi-Arid Land, 90 (Mostly Pasture)
Secondary Reserve, 317
Potential Irrigable Land, 32
Land Requiring Drainage, 55
Forest and Cut-Over Land Not Requiring Drainage, 230
Source: National Industrial Conference Board

Only 39 percent of America's tillable land actually is used for crops — 372,000,000 out of 964,000,000 acres. Another 284,000,000 acres of pasture lands await only the plowing, with an additional 317,000,000 acres making up a huge secondary reserve

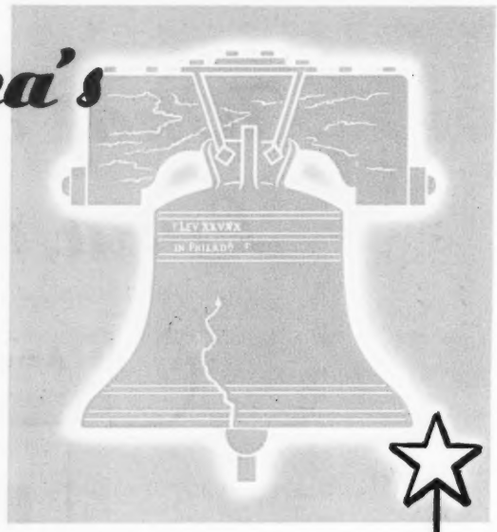
Every country must have timber. America is especially fortunate in owning valuable forests. Lumber production is big enough to fill all the nation's domestic needs and part of the foreign demand

★ America produces one-third of the world's lumber

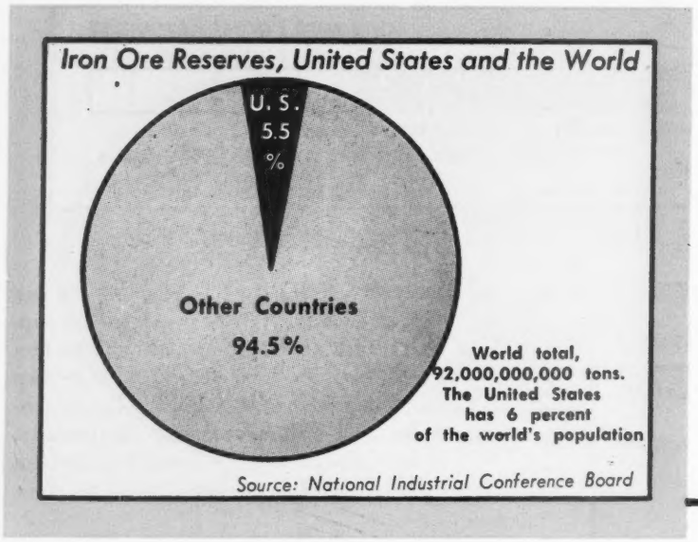

Lumber Production, United States and the World
Each symbol represents 10 percent of world production; blue, America's share
Source: National Industrial Conference Board

Unlike most of the European countries, America possesses ample land and forest resources. Our defense program looks toward keeping these resources for the use of Americans

What Are America's Mineral Assets?

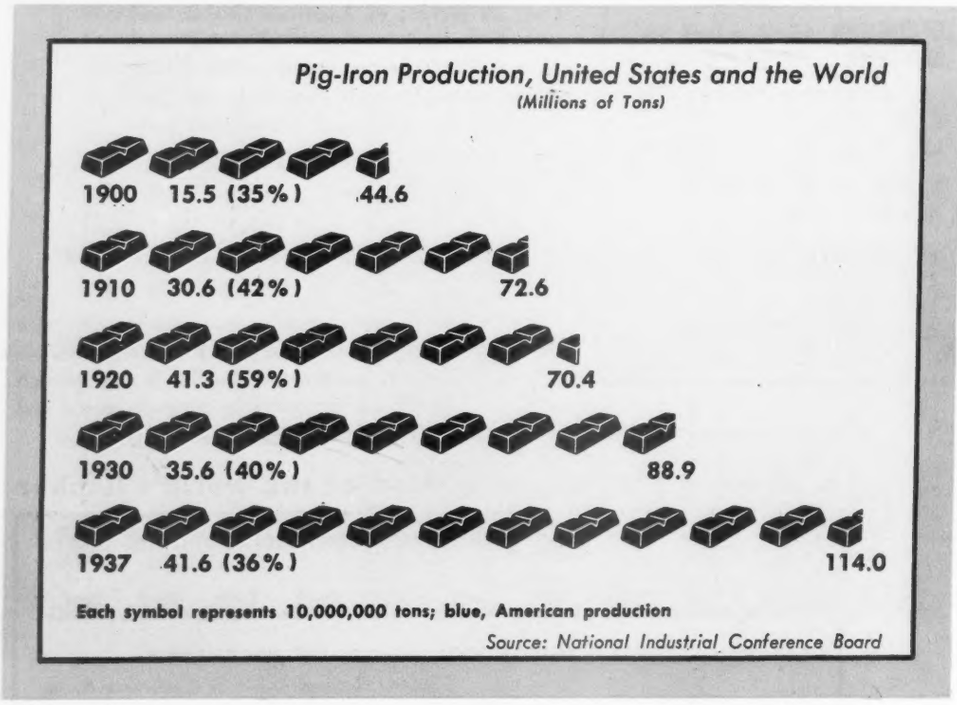


★ America has its fair share of iron ore


Iron Ore Reserves, United States and the World
U. S. 5.5 %
Other Countries 94.5%
World total, 92,000,000,000 tons. The United States has 6 percent of the world's population
Source: National Industrial Conference Board

In comparison with the remainder of the world America breaks about even on iron. With 6 percent of the world's population it has approximately 6 percent of the world's known deposits

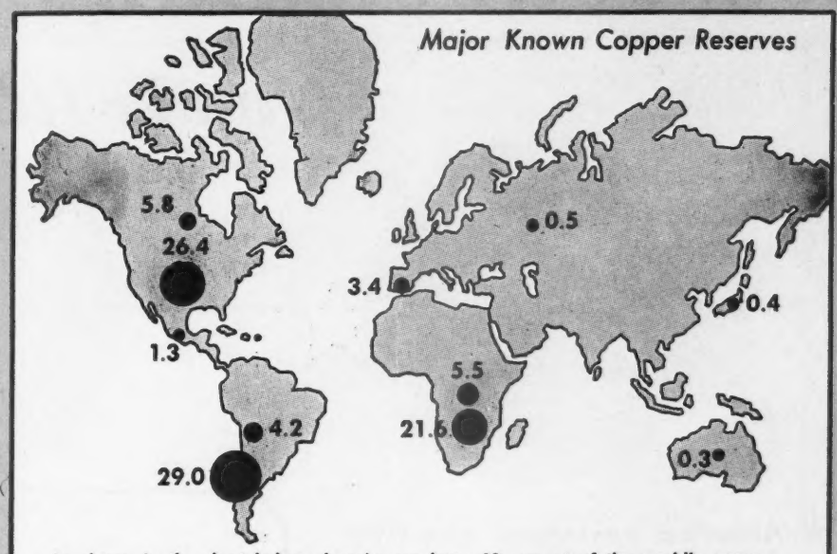
★ America produces over a third of the world's pig iron


Pig-Iron Production, United States and the World
(Millions of Tons)
1900 15.5 (35%) 44.6
1910 30.6 (42%) 72.6
1920 41.3 (59%) 70.4
1930 35.6 (40%) 88.9
1937 41.6 (36%) 114.0
Each symbol represents 10,000,000 tons; blue, American production
Source: National Industrial Conference Board

The amount of pig iron produced in America is astonishing. It amounts to one-third of the world's total. However, this is because we make so many more iron and steel products than do most other nations — like automobiles, buildings, bridges, railway equipment

★ America possesses one-fourth of the world's copper

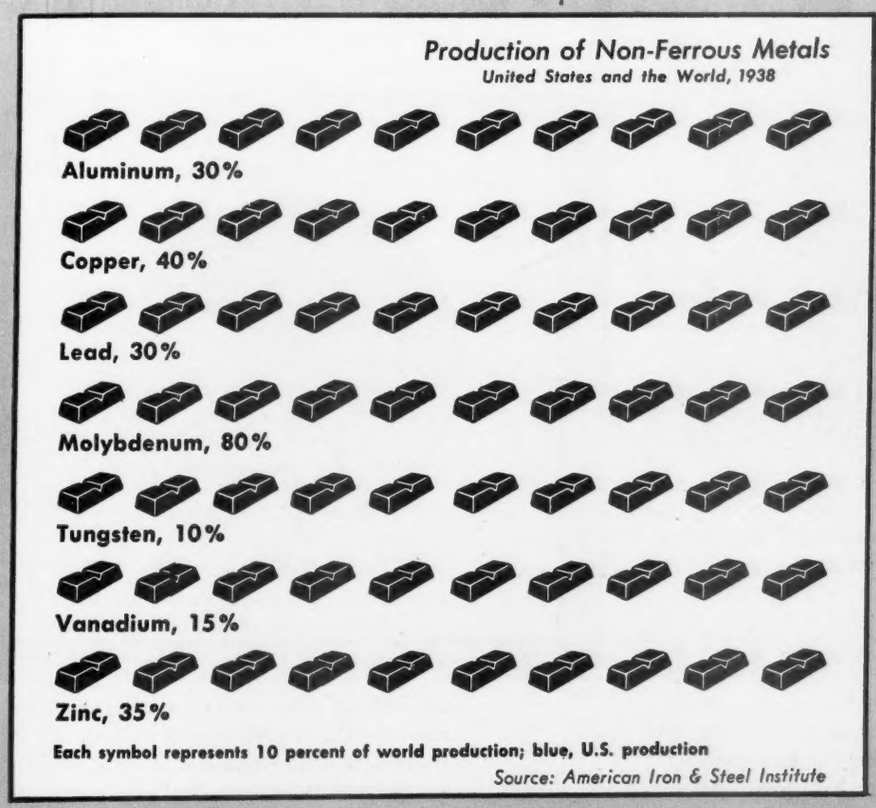
Copper is a vital metal in both war and peace. America need not worry about its supply of this raw material. Its reserves amount to one-fourth of all the known copper reserves of the world



As shown in the chart below, America produces 40 percent of the world's copper

Source: National Industrial Conference Board

★ America is a large producer of other metals

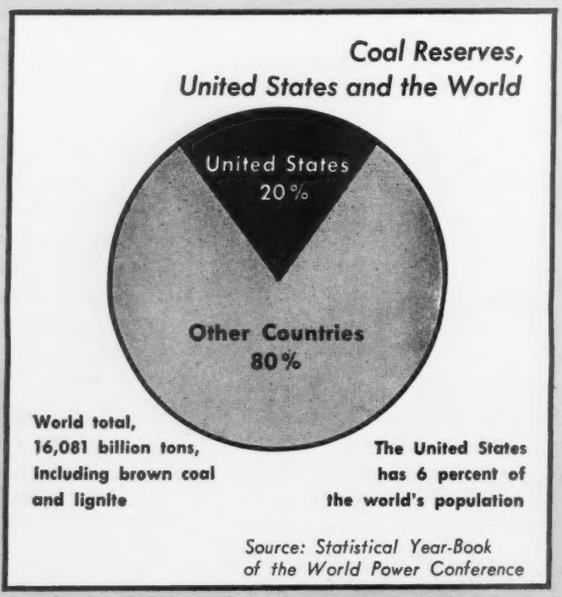


In America extensive use is made of other non-ferrous metals as well as copper. For example, we use a great deal of aluminum, lead, molybdenum, tungsten, vanadium, and zinc. Our production of these non-ferrous metals is extensive, ranging from 10 percent of world production for tungsten to 80 percent for molybdenum. All this production comes from our own ores

Vital in peace and war alike are America's mineral assets. What a boon they would be to countries not so well supplied—and how worthy of protection

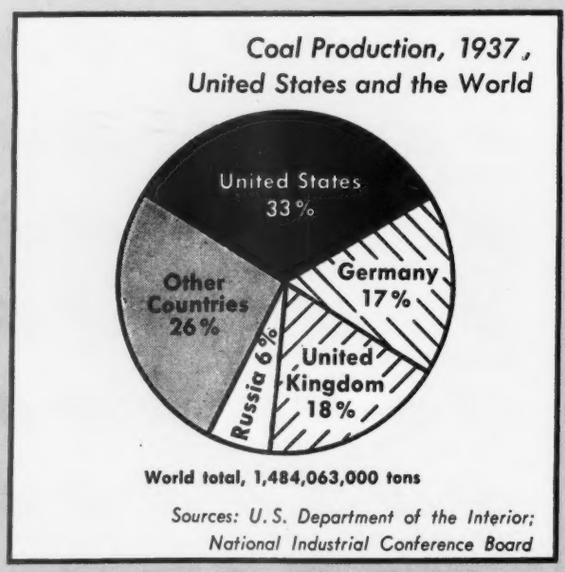
What Are America's Power Resources?

★ America possesses one-fifth of the world's coal



A nation without coal is a nation without complete independence. America, with only 6 percent of the world's population, has 20 percent of the world's coal

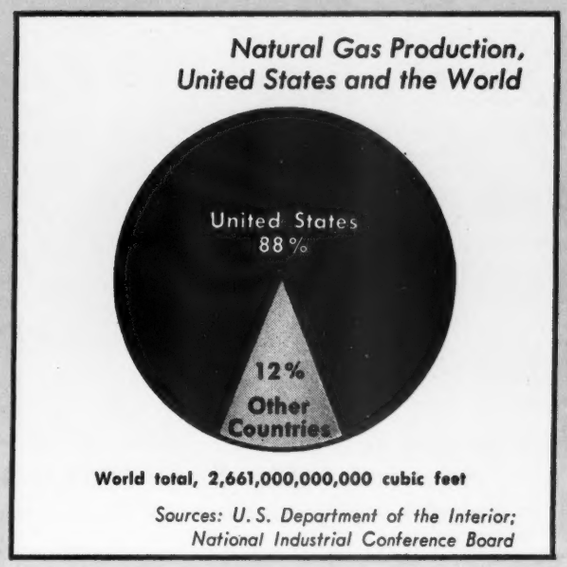
★ America produces one-third of the world's coal



America uses more coal than most other nations. In fact, it consumes practically all it produces. Owning only one-fifth of the world's coal reserves, it produces and uses one-third of the coal used by the world

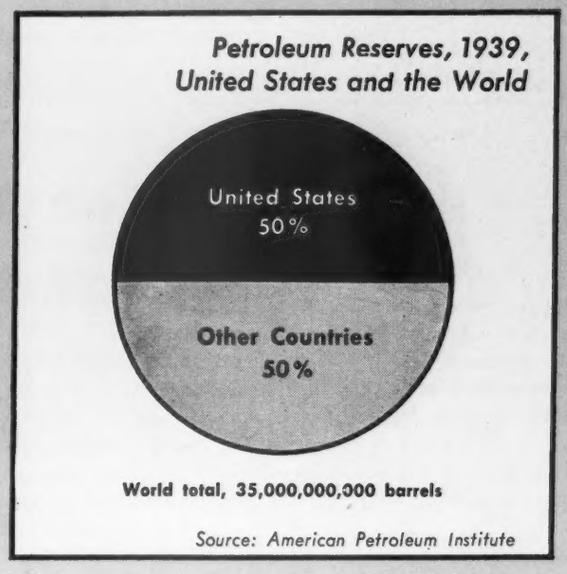
Coal, oil, and water—without them a nation cannot be self-sufficient. America has them in abundance—America will do all that is necessary to defend them

★ America produces 88 percent of the world's natural gas



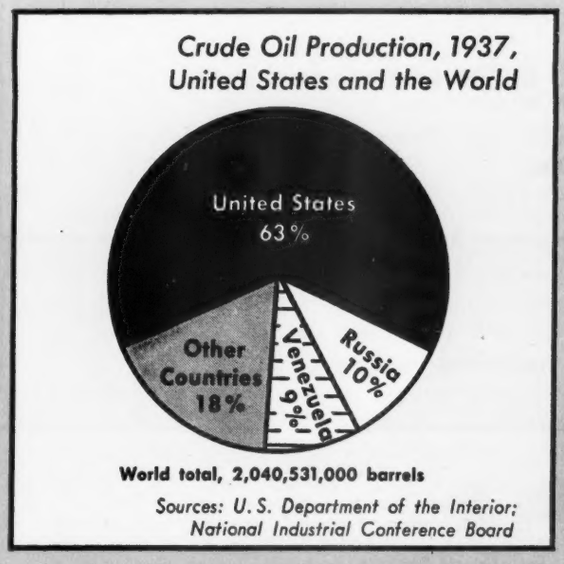
America produces and consumes 88 percent of the world's natural gas — which provides low-cost fuel for industrial and domestic uses

★ America possesses one-half of the world's petroleum



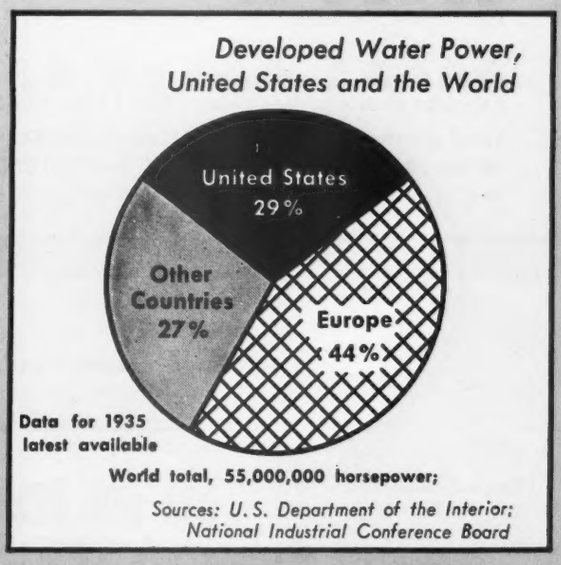
Fortunately for America, in this day of mechanization when oil is so vital, it possesses one-half of the world's petroleum reserves

★ America produces 63 percent of the world's oil



It is to be expected that America, with 50 percent of the world's petroleum reserves, should produce the lion's share of the world's oil. Actually, it produces 63 percent. This supplies home needs, with some over for export

★ America has 29 percent of the world's water power



Even if America does possess one-fifth of the world's coal, it is a nice comfortable feeling to know that it also has 29 percent of the world's developed water power—can always develop plenty more

What Are America's Markets?

Suppose enough housing were built for everybody in America to have good living quarters. Many people would have construction jobs (more than $6,000,000,000 would be spent for labor at the site). Industry would have a big market for its building materials (more than $10,000,000,000 because 62.7 cents of every building dollar goes for materials and equipment). The existing shortage in housing shows that there is plenty of construction work ahead

Housing—$16,500,000,000

★ America's housing shortage creates a market

Residential Housing, 1925-1938

Average expenditure per year, 1925-1929, $2,500,000,000

Average expenditure per year, 1930-1938, $650,000,000

Average shortage per year, 1930-1938, $1,850,000,000

Total shortage, 1930-1938, $16,500,000,000. Total market for products of the manufacturing industries, $10,000,000,000

Each symbol represents $100,000,000 of housing built (or not built)

Source: The F. W. Dodge Corporation

★ Much of America's housing needs repairs

Housing Conditions, 203 Urban Communities

Good Condition, 39%

Need Repairs, 61%

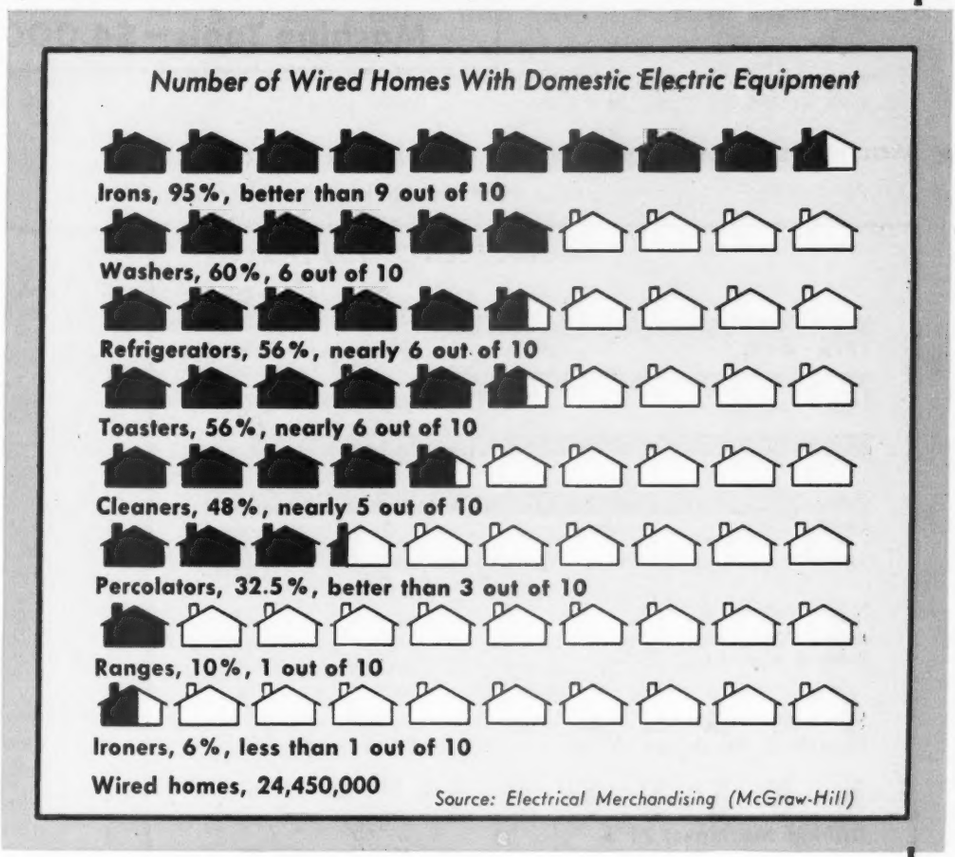
Each symbol represents 10 percent of the 5,000,000 structures surveyed; data collected 1934-1936, published 1938

Source: Works Progress Administration

According to the Works Progress Administration, even the repair job on America's housing is a big one. It reports that 6 out of 10 American houses need repairs; that 14 percent of them need major repairs, 45 percent minor repairs; and 2.3 percent are unfit for use

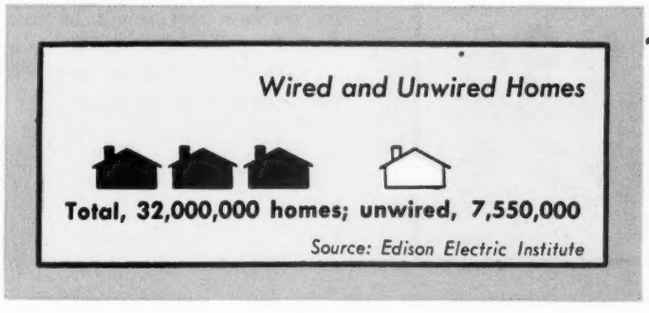
Electrical Appliances—$3,000,000,000

★ There are both new and replacement markets


Number of Wired Homes With Domestic Electric Equipment
Irons, 95%, better than 9 out of 10
Washers, 60%, 6 out of 10
Refrigerators, 56%, nearly 6 out of 10
Toasters, 56%, nearly 6 out of 10
Cleaners, 48%, nearly 5 out of 10
Percolators, 32.5%, better than 3 out of 10
Ranges, 10%, 1 out of 10
Ironers, 6%, less than 1 out of 10
Wired homes, 24,450,000
Source: Electrical Merchandising (McGraw-Hill)

There are many wired homes without irons, washers, refrigerators, toasters, vacuum cleaners, percolators, ranges, and ironers. If one of each of these appliances were bought for each wired home now without, industry would receive more than 10 billion dollars at present prices. Not every home will ever be equipped with *all* these devices. But many of them will. *Factory* thinks it is a fair estimate that $200,000,000 worth can be sold to these homes during the next five years. Add that to normal sales at the 1939 rate ($572,000,000) and the total market for these appliances alone becomes a little over $3,000,000,000 for the 5-year period. This says nothing of the sales of electric clocks, cookers, casseroles, fans, heating pads, and the many other electrical appliances

★ One home out of four is still unwired



In spite of the rapid spread of electrical service, there still are more than 7,500,000 homes unwired. To make electricity available to all is another job ahead of America

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There is economic defense as well as physical defense. Economic defense will be built up to protect America's markets. But economic defense must be backed up by the weapons for physical defense

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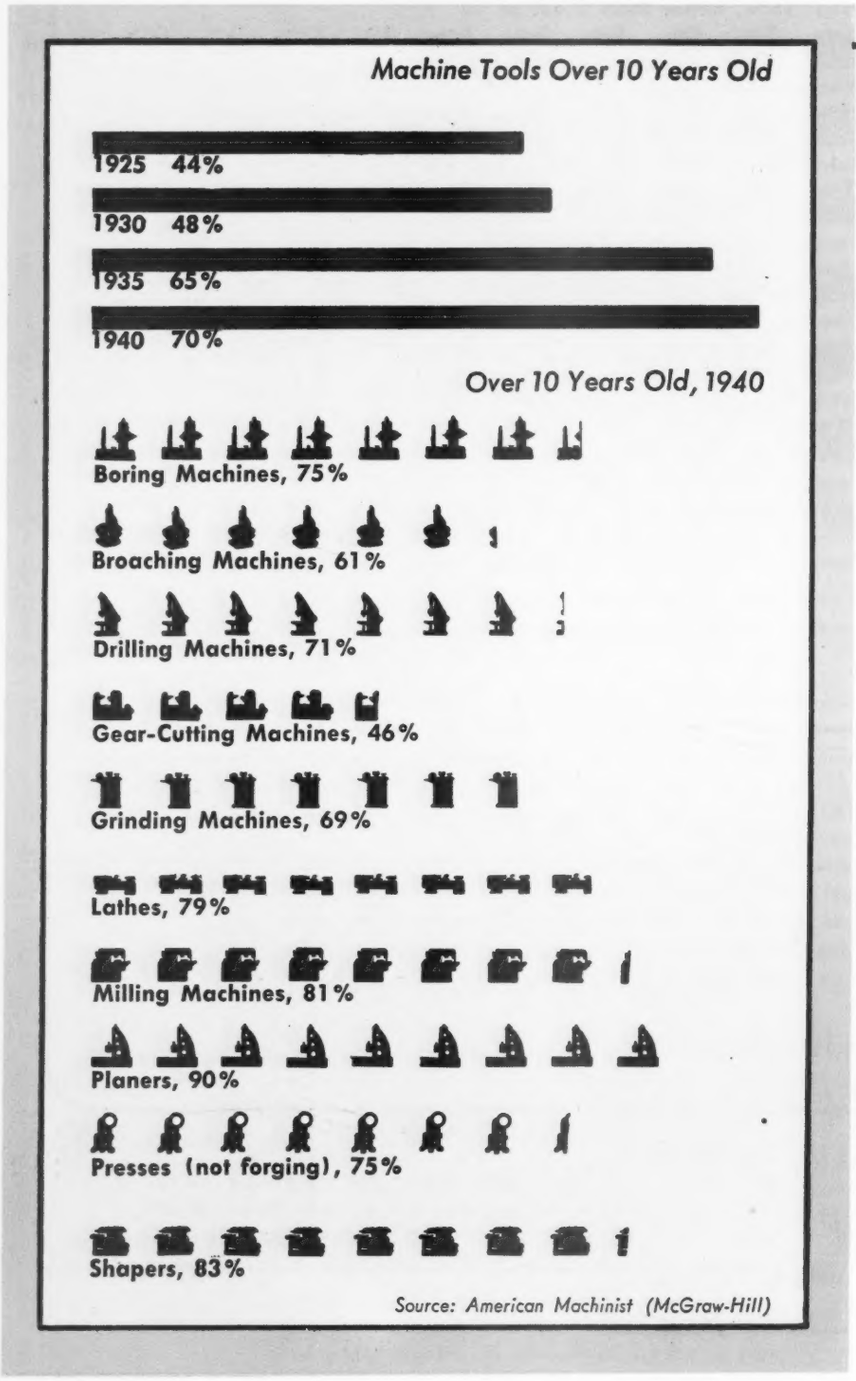
What Are America's Markets?

Machine Tools—$4,000,000,000

★ **Machines over 10 years old provide a big market**

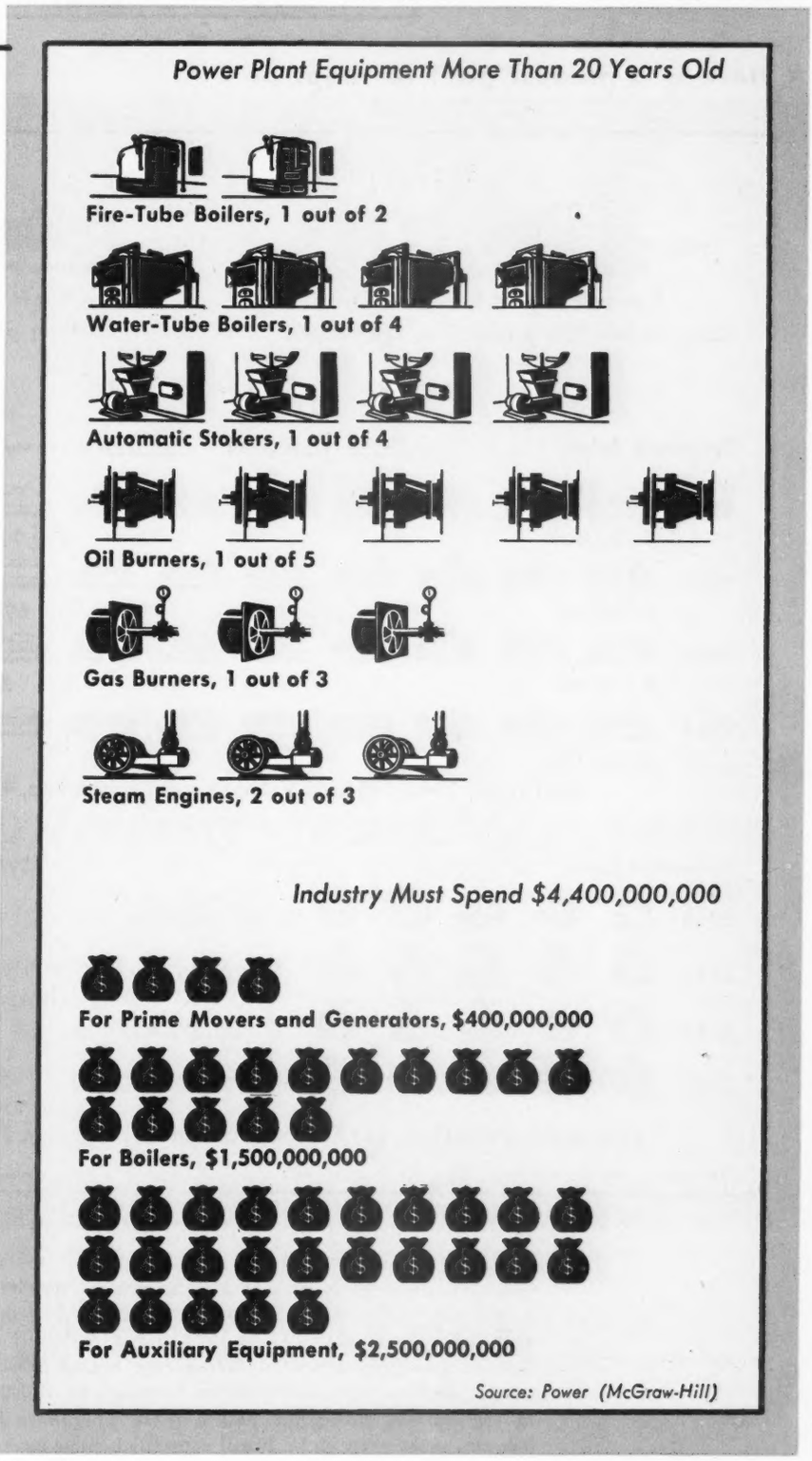


In 1925 only 44 percent of the nation's machine tool equipment was 10 years old or older. Today 70 percent is in that condition. In normal times industry spends about $125,000,000 per year for machine tools to maintain the 70 percent ratio. To modernize to the point where no machine tool would be more than 10 years old, would require an expenditure of about $400,000,000 each year for 10 years

Power Plant Equipment—$4,400,000,000

★ **Much of our power equipment should be replaced**

The market ahead for power plant equipment in industrial plants is tremendous. The magazine *Power* estimates that expenditures of $4,400,000,000 will be necessary if industry is to bring its power plants strictly up to date. This is because more than half of the equipment in industry's power plants, supplying steam, power, and hot water for manufacturing, is more than 20 years old


Power Plant Equipment More Than 20 Years Old
Fire-Tube Boilers, 1 out of 2
Water-Tube Boilers, 1 out of 4
Automatic Stokers, 1 out of 4
Oil Burners, 1 out of 5
Gas Burners, 1 out of 3
Steam Engines, 2 out of 3
Industry Must Spend $4,400,000,000
For Prime Movers and Generators, $400,000,000
For Boilers, $1,500,000,000
For Auxiliary Equipment, $2,500,000,000
Source: Power (McGraw-Hill)

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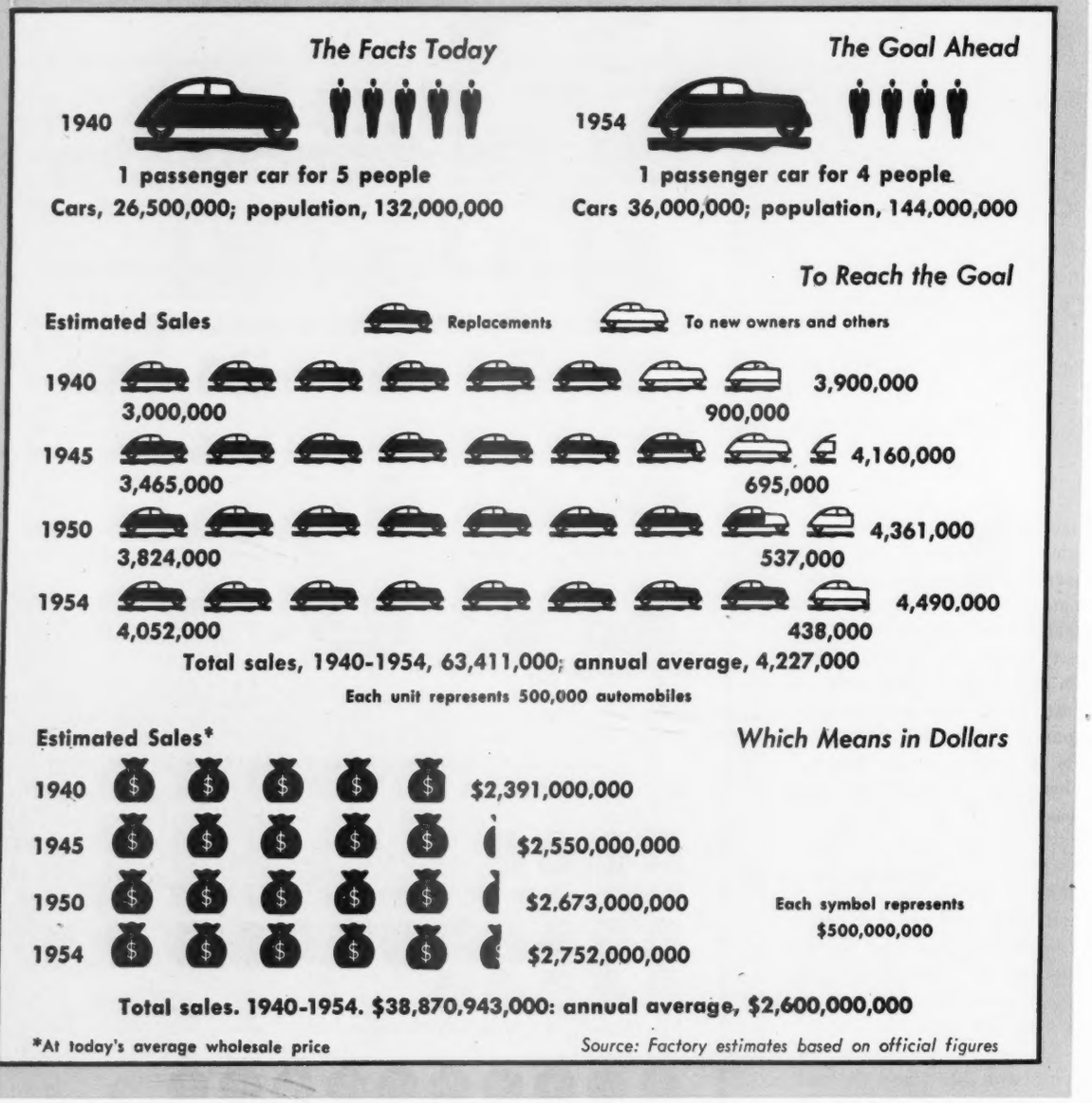
What Are America's Markets?

Automobiles—$2,600,000,000 a Year
(Passenger cars only)

★ **Here is a modest goal to shoot at**



Fifteen years ago there was 1 passenger car for every 6½ people in America. Today there is 1 for every 5. To aim at 1 for every 4 people 15 years from today is therefore a modest goal. To insure conservatism, it is predicated on average annual sales that are well below the all-time high of 1929 with its 4,790,707 cars sold. We get our answers by figuring replacements on an average car life of 8¾ years. Sales to new owners and two-car families begin at 900,000 in 1940, less by 34,000 than the average annual increase in registrations during the past 6 years. They have been reduced 5 percent annually because, as the years go by, it will naturally become increasingly difficult to find new owners

What is holding America back

Government is the only organized representation of the *totality* of the American people. It is also the constitutional operator of our currency and the constitutional controller of our system of banking and credit. Its solvency is necessary to the solvency of our business community and of our whole people.

This does not mean that the government must never go into debt. Business must often borrow. Government must often borrow. But there comes a time when a government, like a business, must begin to show that borrowing has not become an incurable custom and has not been adopted as a substitute for intelligent management.

If a business man this year owes $1,000,000 and next year owes only $900,000 and in the succeeding year only $800,000, his creditors

Ewing Galloway

We are all stockholders, we are all investors, in the government and in the country. We have invested our businesses, we have invested our homes, we have invested our lives, in the country's future

are not too uneasy about him. In fact, they begin to feel a lot of confidence in him. They can see that he is showing a conscience and is making progress.

But if, with his plant remaining the same size, he this year owes $1,000,000 and next year $1,100,000 and in the succeeding year $1,200,000 and so on, apparently indefinitely, his creditors—and his stockholders—become extremely alarmed.

Now we are all stockholders, we are all investors, in the government and in the country. Some of us have government bonds. But that is the smallest part of the matter. We have invested our businesses, we have invested our homes, we have invested our lives, in the country's future. Our confidence in the country is shaken when the government behaves like a common ne'er-do-well.

It is further shaken when the government passes laws making legitimate business operations unnecessarily difficult and creating unnecessary strife between different elements in the population.

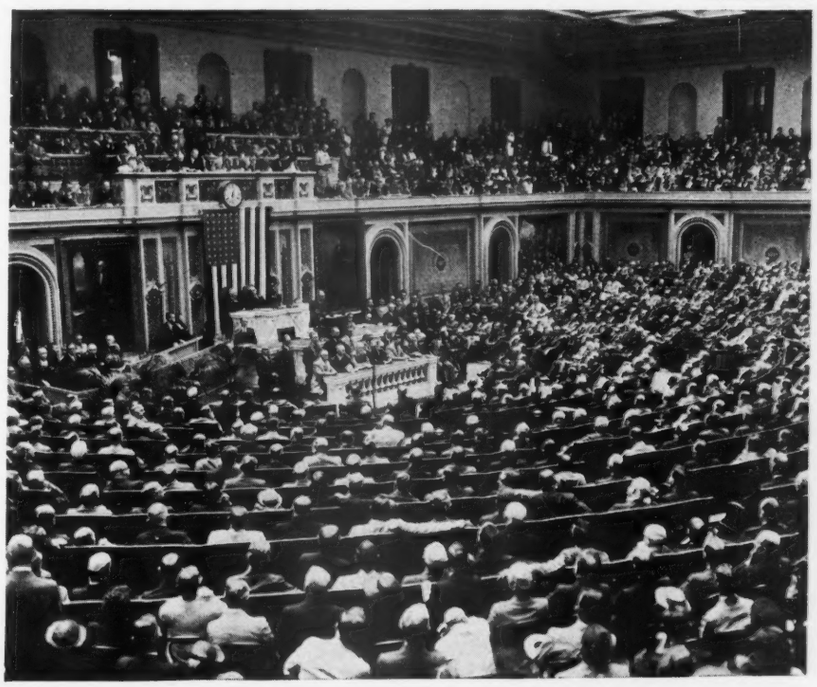
It is more than shaken, it is almost destroyed, when the government embarks upon promiscuous abuse of business and talks vaguely about

unspecified measures yet to be taken for the purpose of showing business who is "master." *Government by terror cannot produce business progress.*

When government goes continuously deeper into debt and when it simultaneously raises taxes and when, again, simultaneously, it decries and denounces the business system which has to produce the wealth to pay the taxes and to repay the debt, the business man begins to cease to row the business boat as vigorously as he could. Instead of bending to the oars and pulling with his whole weight, he begins to float with the tide. For a long time now the industrial energy of America has not been what it ought to be.

A first step toward restoring it to what it ought to be, is a drastic revision in the government's present debt policies and tax policies. This is especially important in view of the immense sums that must be raised for defense. The following pages show what those policies have been doing to the country.

Ewing Galloway

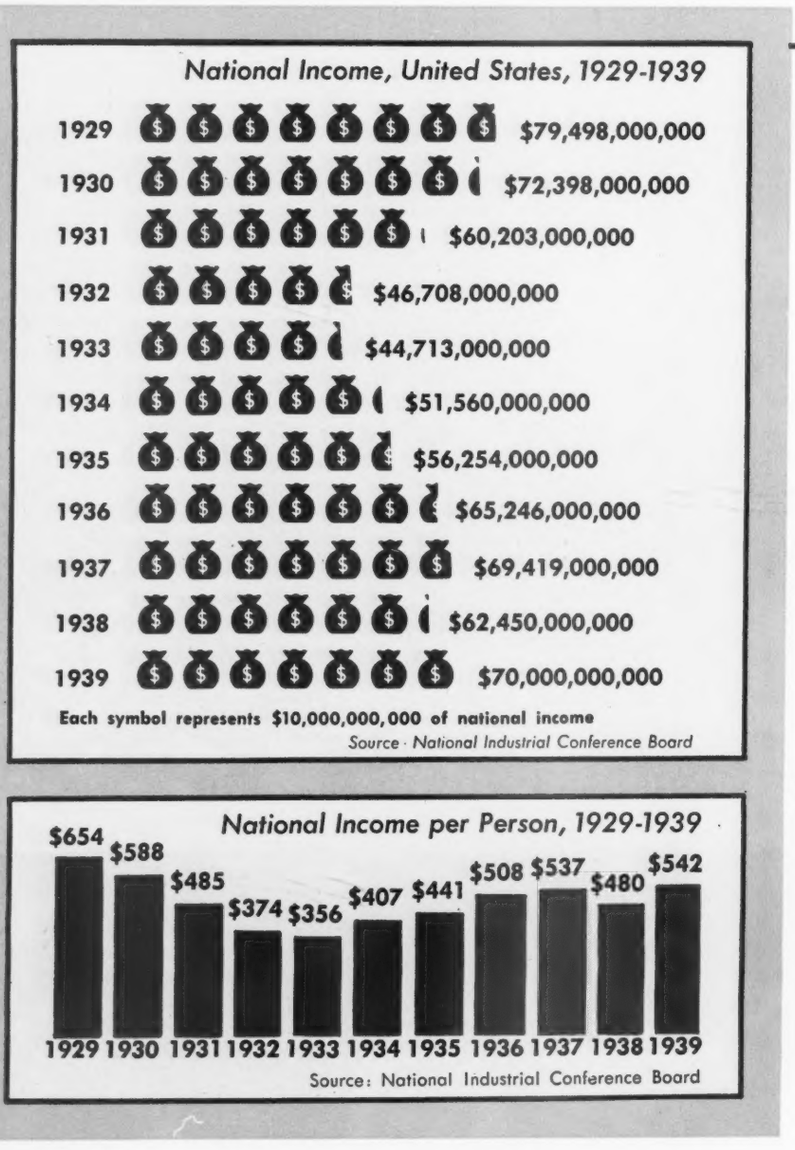


A first step toward restoring the industrial energy of America to what it ought to be is a drastic revision in the government's present debt policies and tax policies. It is a step that Congress has the power to take

Twenty-two percent of the national income goes for taxes—from corporations and individuals. Some taxes are direct — like taxes on incomes and cigarettes. Others are indirect—those on bread, for example, which the consumer pays, but does not know he is paying

Is America Being Held Back?

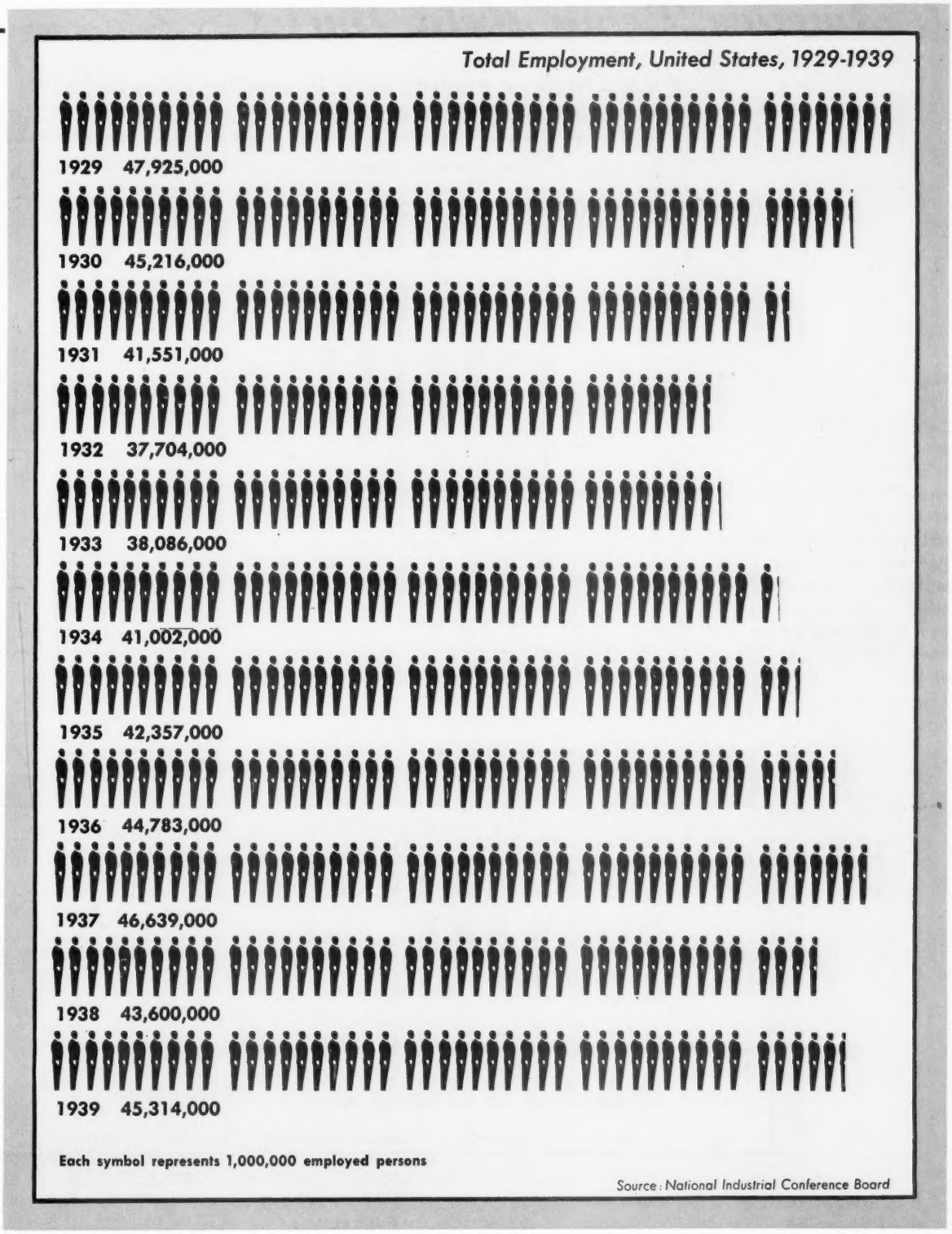
★ **Yes. National income is below the high of 1929**



Whether America is moving forward at its usual pace can be determined by comparing the national income from year to year. In 1929 the national income was about 79.5 billion dollars. It went down to less than 45 in 1933, climbed back to almost 70 in 1937, dropped to 62.5 in 1938. It is estimated that 1939 national income was just about 70 billions. That is still about 10 billions under the high of 1929

Expenditures for defense will raise national income and employment. Yet both must be paid for out of the income gained from normal goods and services. Economy must be the watchword in all government expenditures

★ Yes. Total employment is less than it was 10 years ago



Another measure of a nation's progress, or lack of it, is employment. Total employment in the United States averaged a little over 45 millions in 1939. Ten years earlier it averaged almost 48. During the intervening years it went as low as 38 millions and as high as 46.6. In 1937 total employment was almost back to the high of 1929, but in the meantime the population had increased and total employment should have been correspondingly higher

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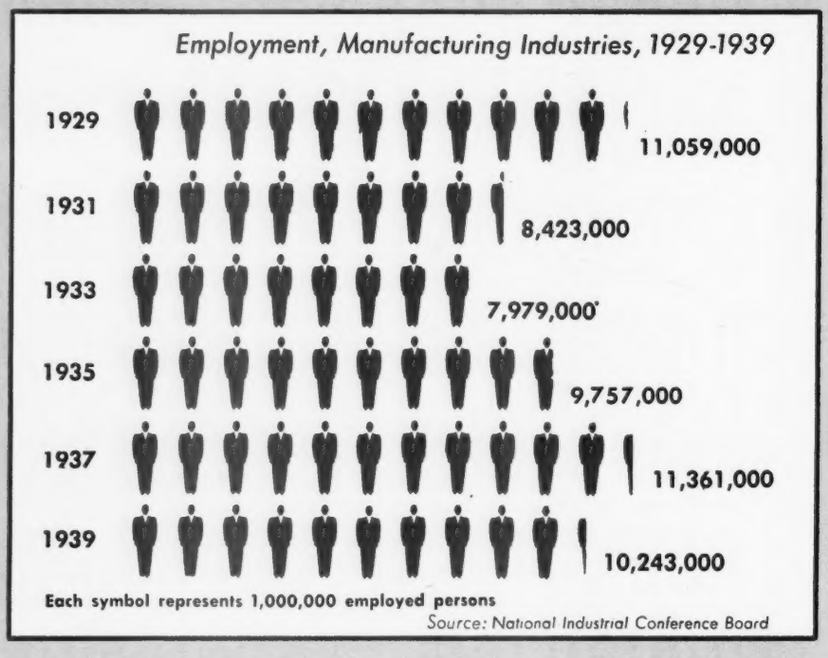
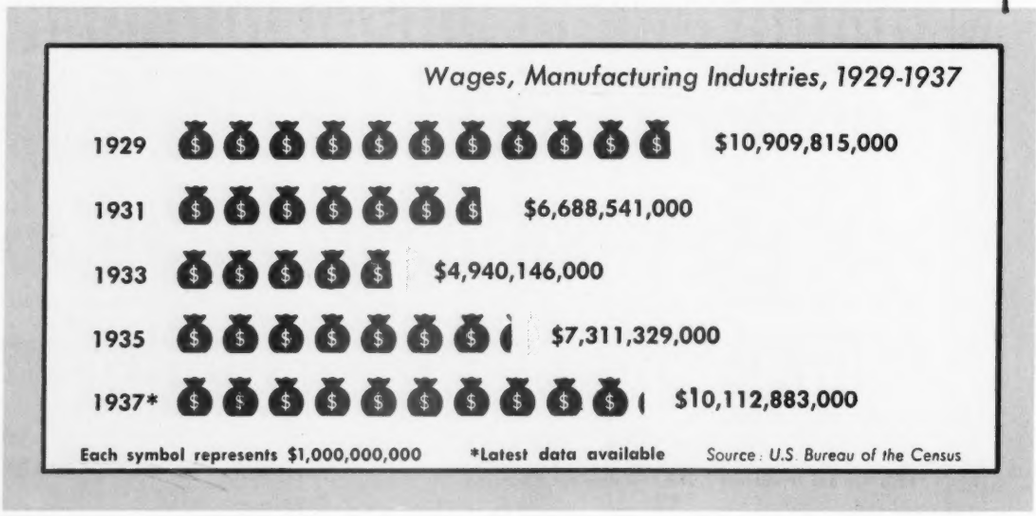
Is America Being Held Back?

★ Yes. Factory employment is smaller than in 1929



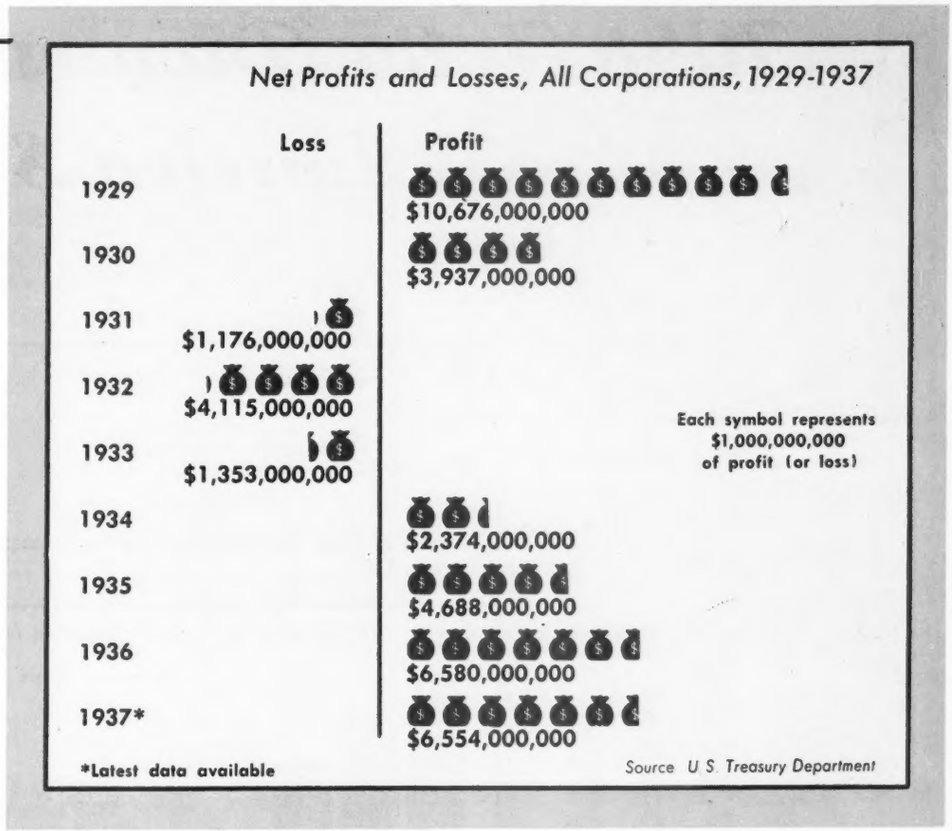
Comparing 1939 (latest figures available) with 1929, we find fewer employees in factories. The total of wage earners and salaried employees is 800,000 less. It is a hopeful sign that factory employment in 1937 exceeded that of 1929; however, the shorter work week in 1937 did not permit production as large as that of 1929

★ Yes. Total factory wages are smaller than 10 years ago



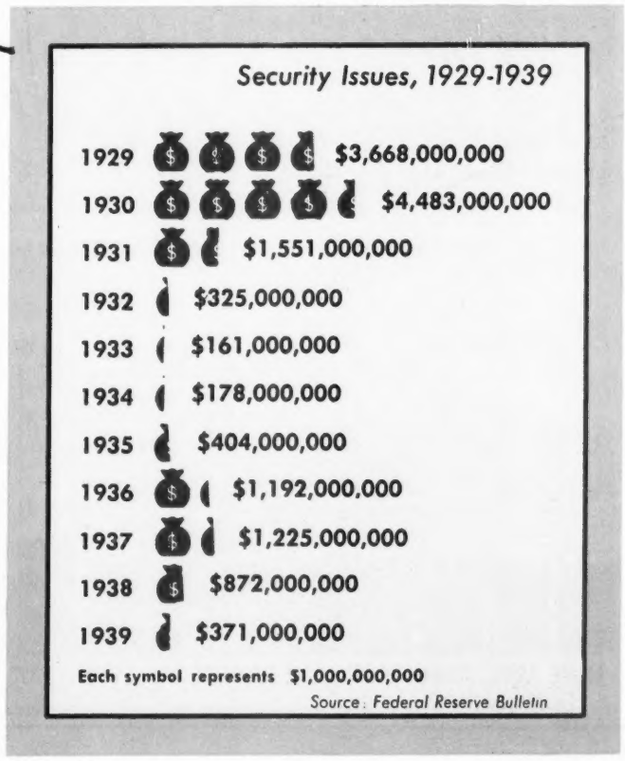
Wage earners received about $800,000,000 less in 1937 (latest figures available) than they did in 1929. This is significant, because there were more employees in 1937, working at higher rates. Whenever hourly rates go too high and the work week becomes too short, the total compensation received by wage earners goes down

★ Yes. Profits are smaller than they were 10 years ago



Profits made by corporations in 1937 (latest figures available) were only 62 percent as much as in 1929. Low profits for industry held back investment, new plant construction, and modernization. Note that in the three years 1931-1933 there were losses instead of profits

★ Yes. Less money is being invested



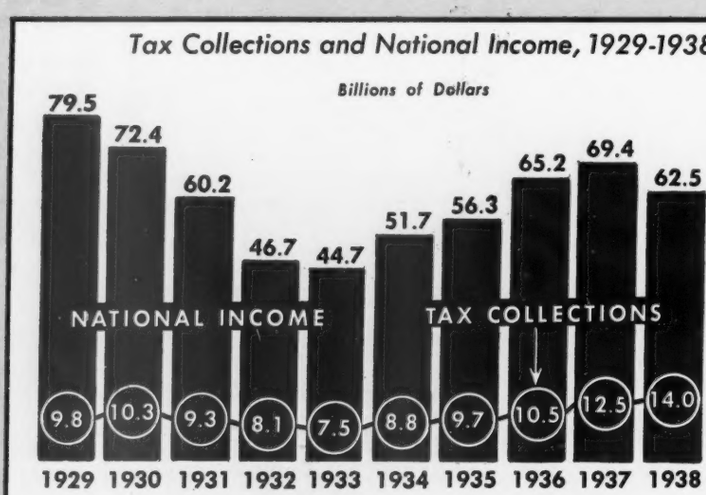
It has always been true that rapid progress in America has been accompanied by extensive investment in securities. The drop in security issues, from 3.7 billion dollars in 1929 to 371 millions in 1939, is strong evidence of slow national progress

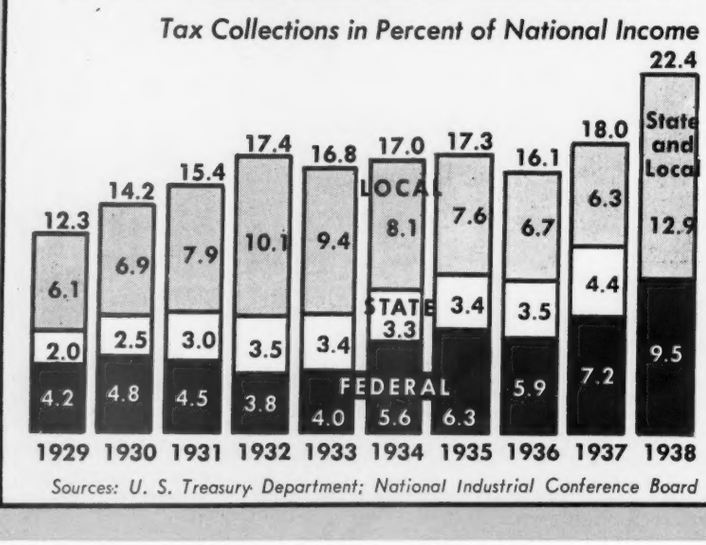
There should be no flock of millionaires created by the production of defense equipment. Nor should industry carry its defense load for nothing or at a loss. A fair profit will be a fair incentive, and will encourage the investment of capital

Why Is the Progress of America So Slow?

★ **Because the nation pays too much in taxes**

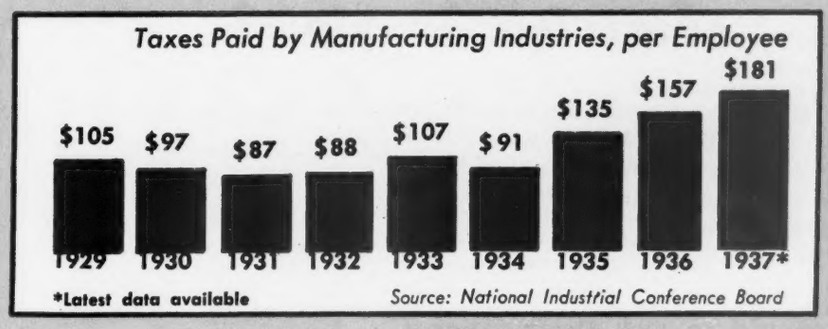
When only 12.3 percent of national income went for taxes, as in 1929, there still were many unfilled needs and wants. With 22.4 percent of national income going for taxes, as in 1938 (latest figures available), those unfilled needs and wants have increased. It is easy to see that what the nation does not have to spend for taxes, it can spend for wages, equipment, and other things





Yes, the nation, industry, and the individual pay too much in taxes. They will pay more as new taxes for defense are collected. This makes it all the more important that government's expenditures for ordinary purposes be pared to the bone

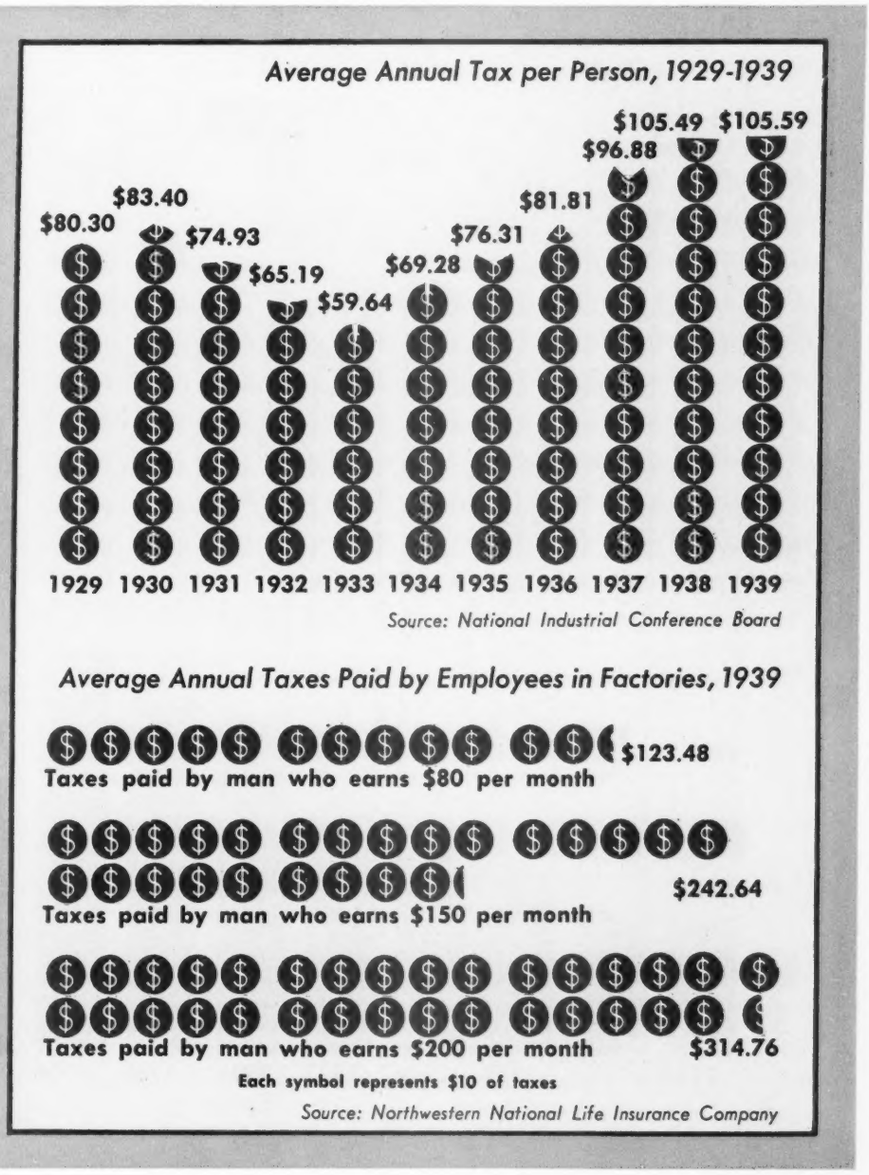
★ Because industry pays too much in taxes



In 1937 factories paid in taxes $76. more per employee than they paid in 1929. Just suppose that those additional tax dollars could have been devoted to the purchase of better equipment and the reduction of prices

★ Because individuals pay too much in taxes

For every man, woman, and child, $25.29 more in taxes had to be paid in 1939 than in 1929. That totals 3⅓ billion dollars, which would have helped America very much if it could have been spent for the products of industry and agriculture. Wage earners worked 1½ months in 1939 just to pay their tax bills



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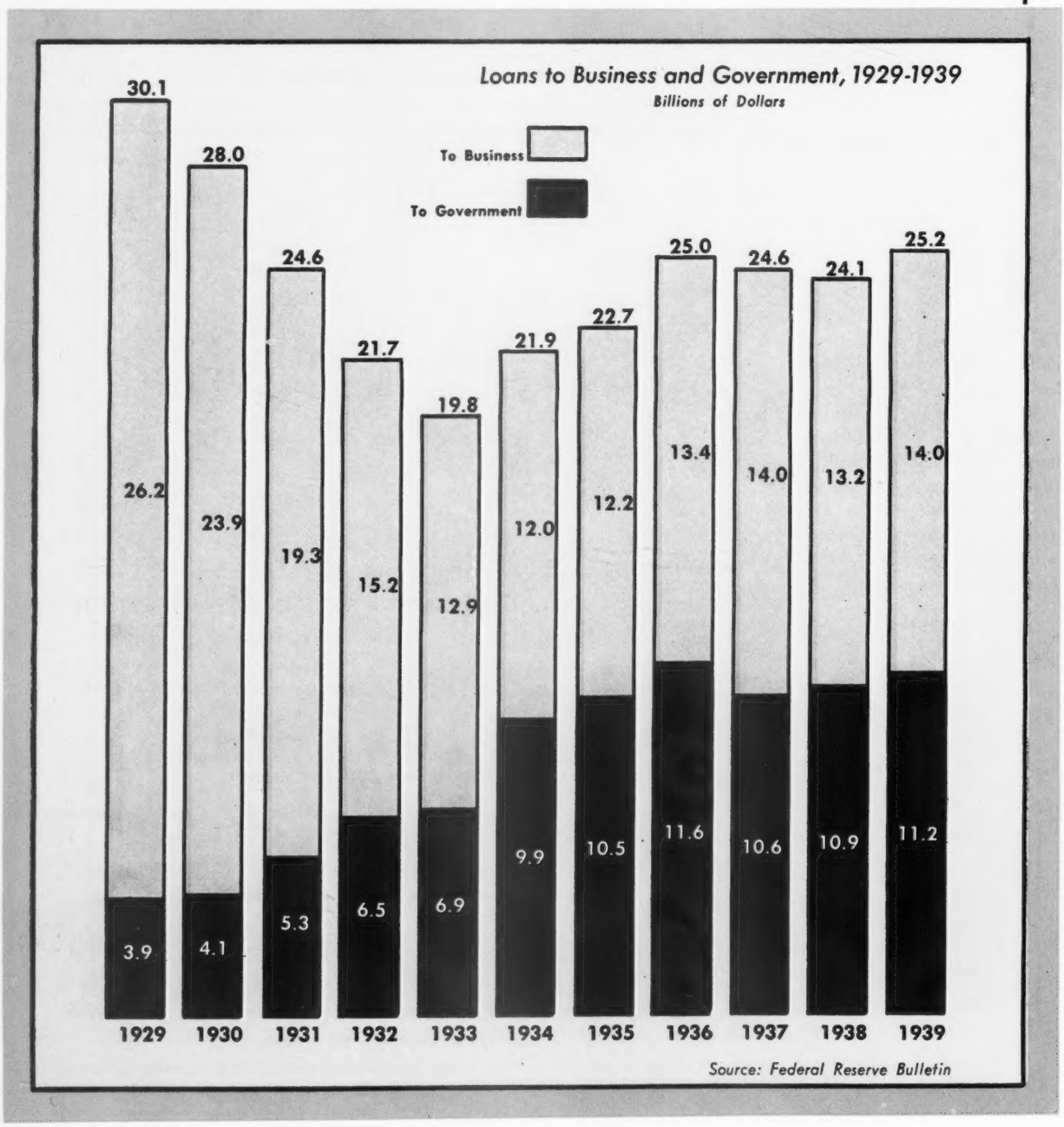
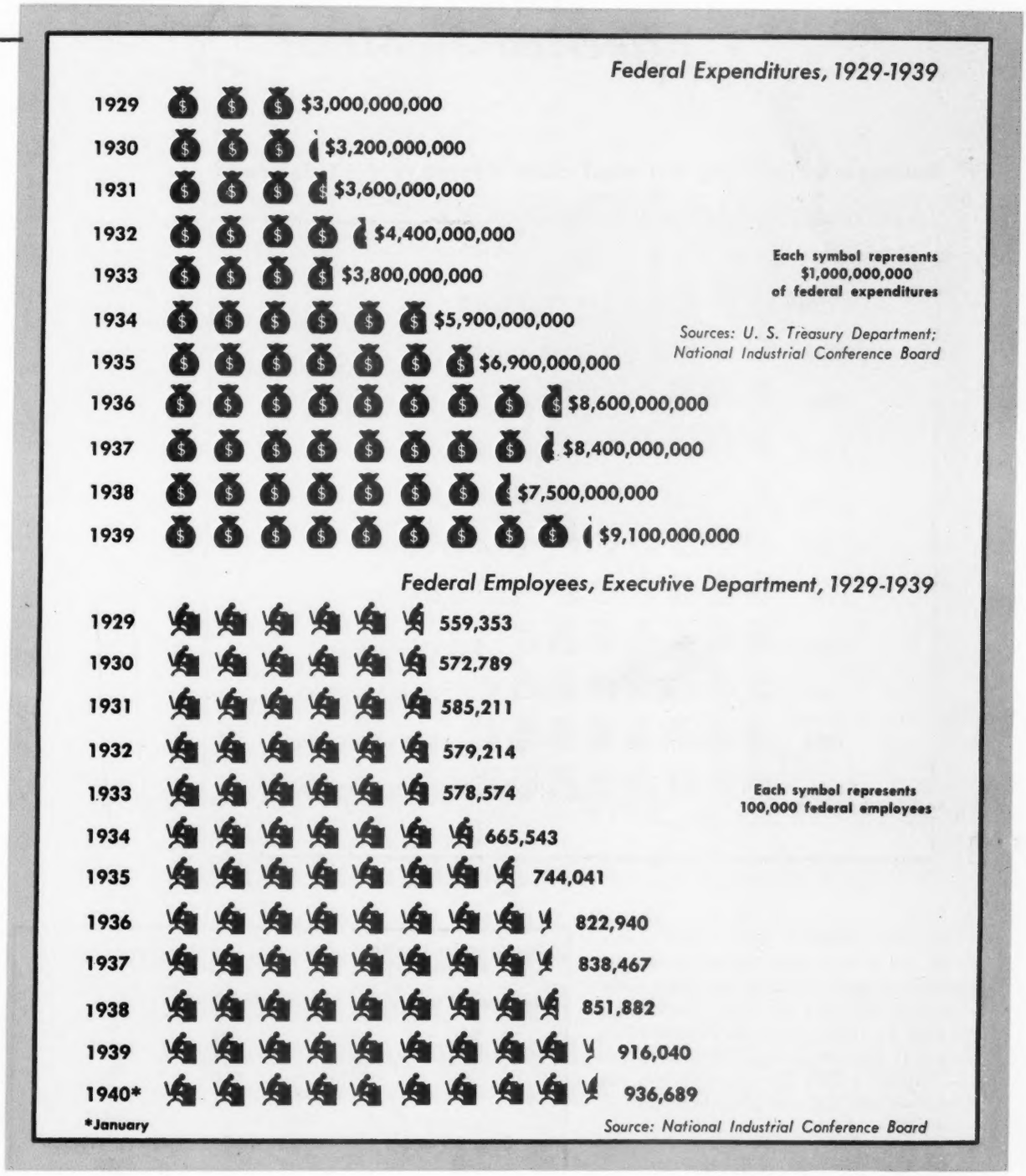
Why Is the Progress of America So Slow?

In 1929 business got 87 percent of the money loaned to business and government by the banks of the Federal Reserve System. In 1939 business got only 56 percent. Loans to business represent "risk" or "venture" money. Loans to government represent "safe" money. Rapid progress has always been accompanied by investment of plenty of "venture" capital

★ Because people are afraid to risk their money



★ Because the government is so extravagant



Every business fights hard to keep its overhead expenses low. If it doesn't succeed, it is likely to go into the red. Government expenditures (local, state, and federal) are the overhead of a nation. The federal part alone of America's overhead has risen from 3 billion dollars in 1929 to more than 9 billions in 1939. And America is in the red. A tremendous increase in the number of federal employees is part of the cause

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The expenditures and the numbers of employees shown here are "before defense." The data prove beyond dispute that great economies in the interest of defense can be made by the federal government

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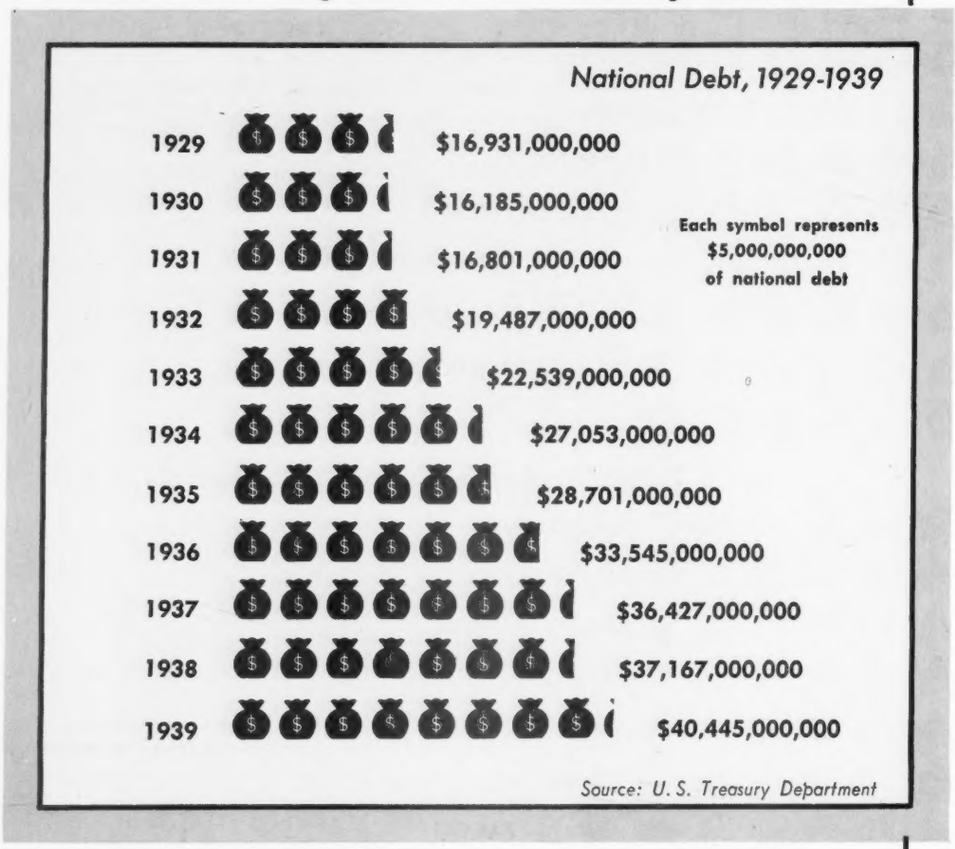
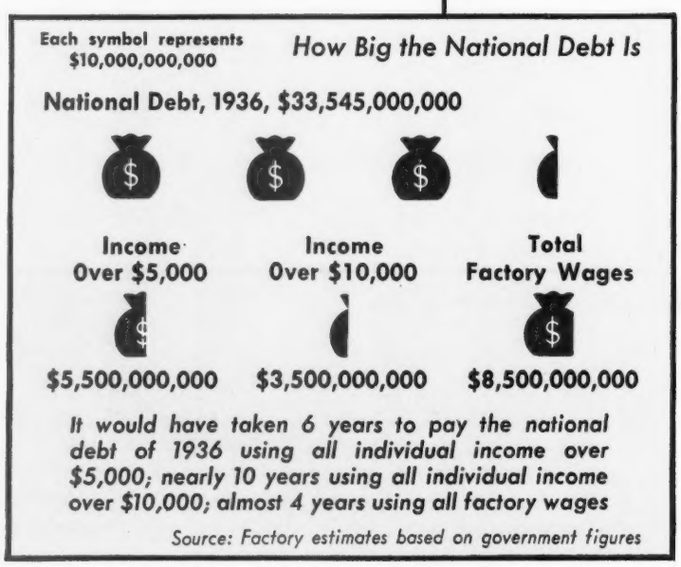
Why Is the Progress of America So Slow?

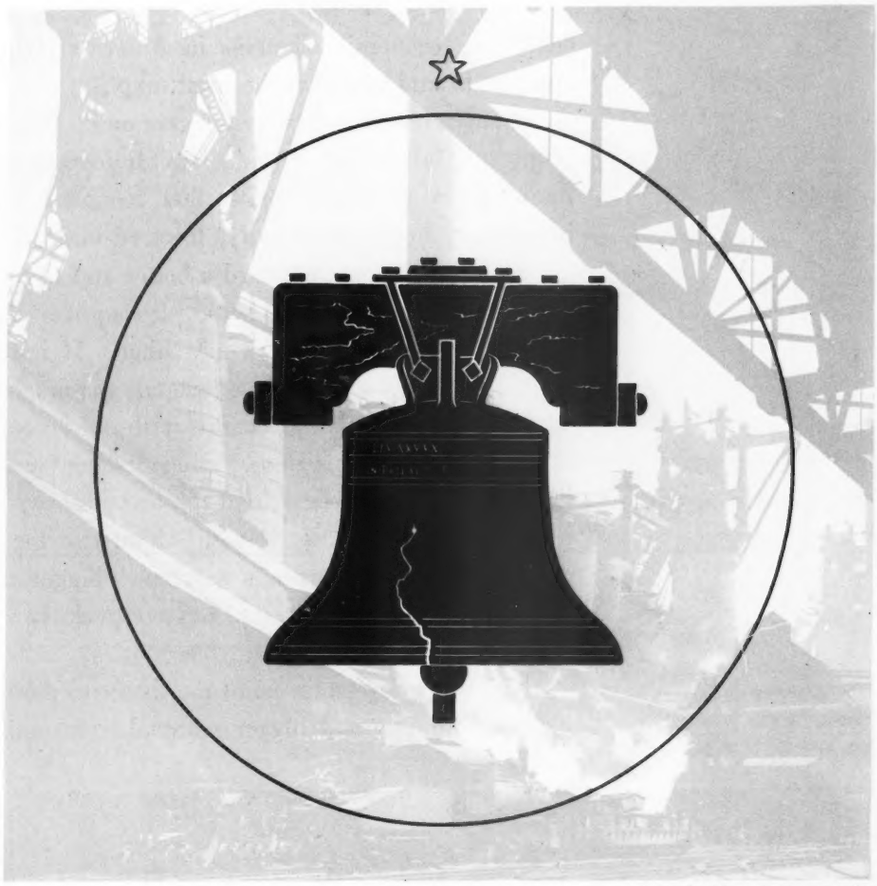
★ **Because increasing national debt destroys confidence**



Just a fair amount of debt is likely to provide incentive, to either a business or a nation. But a really big debt may make either one feel, "Oh, what's the use?" The national debt in the United States has increased from about 17 billion dollars in 1929 to more than 40 billions in 1939. The nation's people just don't see how it is ever going to be paid off


Each symbol represents $10,000,000,000
How Big the National Debt Is
National Debt, 1936, $33,545,000,000
Income Over $5,000
Income Over $10,000
Total Factory Wages
$5,500,000,000
$3,500,000,000
$8,500,000,000
It would have taken 6 years to pay the national debt of 1936 using all individual income over $5,000; nearly 10 years using all individual income over $10,000; almost 4 years using all factory wages
Source: Factory estimates based on government figures

The national debt will increase because of defense. But steps can be taken to bring government's ordinary expenditures in line with its ordinary income. That much the people of America have every right to demand



Carnegie-Illinois Steel Corporation

How America can go ahead

America, in order to go ahead, must have energy; but first, it must have *understanding*. It must *understand* the economic process.

The following pages illustrate that process. In charts and graphs they show certain truths, as, for instance:

Mechanization creates a great many more jobs than it eliminates.

Our present rate of investment of new capital in new machines and in other durable goods must be greatly accelerated.

Lower taxes would mean more jobs, more wages, more salaries.

Industrial strife is a hindrance to economic progress.

Economic progress requires harmony, almost like the harmony of an orchestra. An orchestra would get nowhere if every instrument insisted on playing a tune all its own. We have too many solos by

conflicting economic elements in America right now. We need to get together to find out what the joint tune is.

It ought really to be easy to agree on it. The facts show how economic progress is always produced. The following pages chart some of those facts. They prove, we think, that economic progress comes from high investment, high productivity, lowered costs, lowered prices.

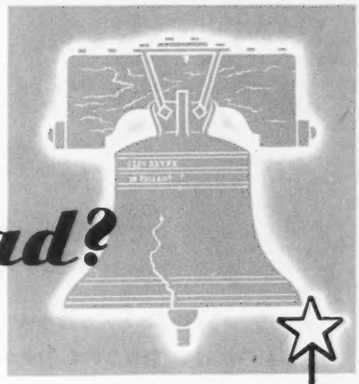
This line of march toward a better and better national living requires harmony among the marchers. It requires that they understand that class selfishness *retards* the marching. If industry demands too much for the stockholders, if labor demands too much for the wage workers, if government demands too much for the bureaucrats, there is conflict and disorder instead of progress. Each element (if we may rapidly shift from orchestras and marchers to the kitchen stove) must be content with its just share of the national pie. Otherwise the pie will not get bigger. And it is only a bigger pie, a very much bigger one, that can give America the kind of living it ought to have, especially with defense expenditures taking such a big bite.

Our economic progress comes from high investment, high productivity, lowered costs, and lowered prices

The following pages point the finger to the historic *proved* successful recipe for bigger and bigger national economic pies.

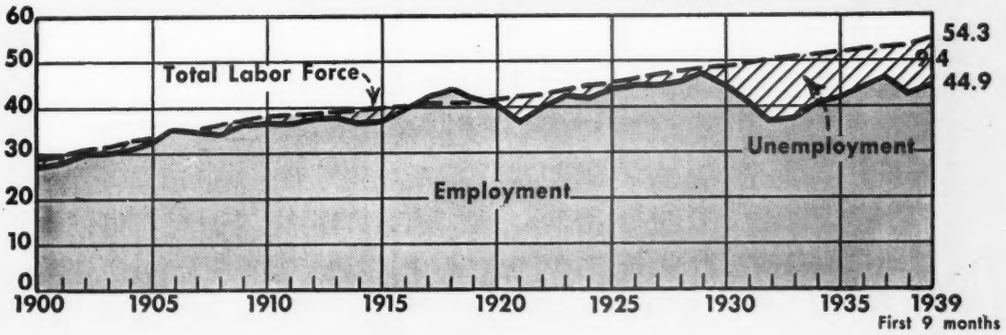
General Motors Corporation

What Is The Biggest Job Ahead?



★ **Increasing production for greater employment**

Total Employment and Unemployment, 1900-1939
(In millions)



National Income and Employment, 1929 and 1940

$79,498,000,000

National income, 1929

48,354,000

Labor force, 1929 (employed, 47,925,000; unemployed, 429,000)

$1,644

National income per member of labor force, 1929

55,000,000

Labor force, 1940

$90,420,000,000

National income needed, 1940 — to provide employment for every member of the labor force at 1929 standards ($1,644 of national income per member of the labor force)

Each money bag represents $10,000,000,000; each man, 1,000,000 persons

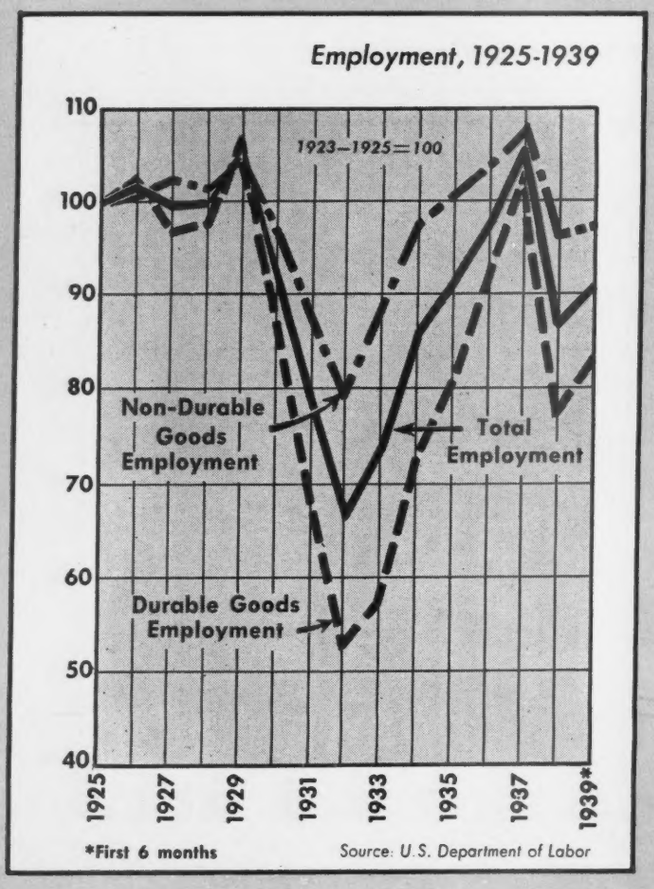
Sources: National Industrial Conference Board; Factory

Since industrial America came into being there have been enough jobs, by and large, for the total labor force — that is, everyone who wanted to work. For the past 10 years, though, there have not been enough jobs. That is because America lowered its production; its people became convinced that the nation was overproduced. The fact is, only greater production will give the larger number of jobs. It is production that creates national income. It is bigger national income that must be had if there are to be jobs for all who want to work

America's defense program will add jobs. Yet those very jobs must be paid for out of the production of normal goods. Therefore increased employment in non-defense occupations must take place

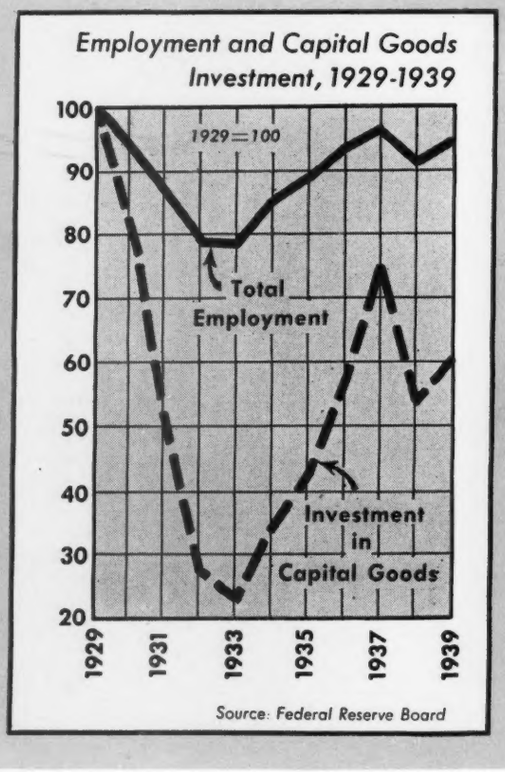
What Is the Key

★ Employment follows durable goods production



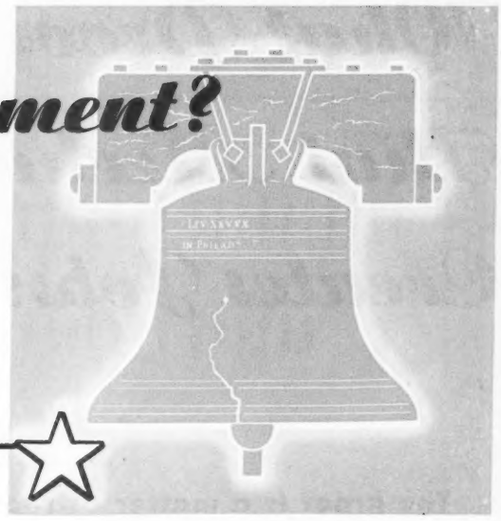
During a depression the plants making durable goods (goods that last a long time) get few orders, have to lay off many workers. Plants making non-durable goods (which wear out or are consumed quickly) are able to hold up their employment much better. Their products are more nearly in the "necessities" group. In 1932, for example, at the worst of the depression, the index of total employment was down to 67, durable goods employment was down to 53, while non-durable goods employment held up at 80. So the durable goods plants are the ones that need the orders that build up employment

★ Employment is high when plenty of money is invested in capital goods



Lots of durable goods are capital goods (such as machinery used to make all kinds of products). Durable goods and capital goods ride along together. When plenty of durable goods are produced, plenty of money is invested in capital goods. And employment rides along with this investment. This can be reasoned out in detail. But it does not have to be. The figures have spoken for themselves for many years

to Greater Employment?



★Every $5,000 invested in capital goods adds a job

Capital Goods Investment, Manufacturing Industries, 1920-1939

$8,000,000,000

Average annual investment, 1920-1929

$5,000,000,000

Average annual investment, 1930-1939

Each symbol represents $1,000,000,000

Average Annual Shortage, 1930-1939

$3,000,000,000

Source: Federal Reserve Board

Making Up Shortage in 10 Years Would Create These Jobs in Durable Goods Industries

600,000

Based on $5,000 average production per employee in 10 representative durable goods industries; each symbol represents 100,000 employees

Sources: U.S. Bureau of the Census; Factory

Take ten capital goods industries—any ten you like. Divide the value of their product for a given year by the number of their employees for that year. You will find that those industries turned out $5,000 worth of product per employee. America has to put 8 billion dollars a year into capital goods just to keep its industries in good working condition. America failed by 30 billions to put what it should into capital goods during the ten years, 1930-1939. To make up that shortage alone, and disregarding later shortages, would create 600,000 jobs for 10 years. There would be many additional jobs in the plants that bought and used these capital goods

What Proof Is There That Mechanization Creates Jobs?

☆ **The proof is a matter of record**

*Wage Earners, Steel Industry, 1880 and 1937**

Each symbol represents 100,000 jobholders

141,000 1880 1937 470,000 (increased 233%)

*Wage Earners, Printing and Publishing, 1890 and 1937**

165,000 1890 1937 419,000 (increased 154%)

*Wage Earners, Food Industries, 1929 and 1937**

569,000 1929 1937 888,000 (increased 56%)

*Stenographers and Typists, 1920 and 1930**

615,000 1920 1930 811,000 (increased 32%)

*Bookkeepers, Cashiers, and Accountants, 1920 and 1930**

735,000 1920 1930 931,000 (increased 27%)

**Latest data available*

Source: U.S. Bureau of the Census

*Jobs Lost and Gained, 1920 and 1930**

1920 1930

For every job lost in vanishing industries, 2.8 jobs have been added in growing industries. Based on data for 19 principal vanishing and 19 principal growing occupations

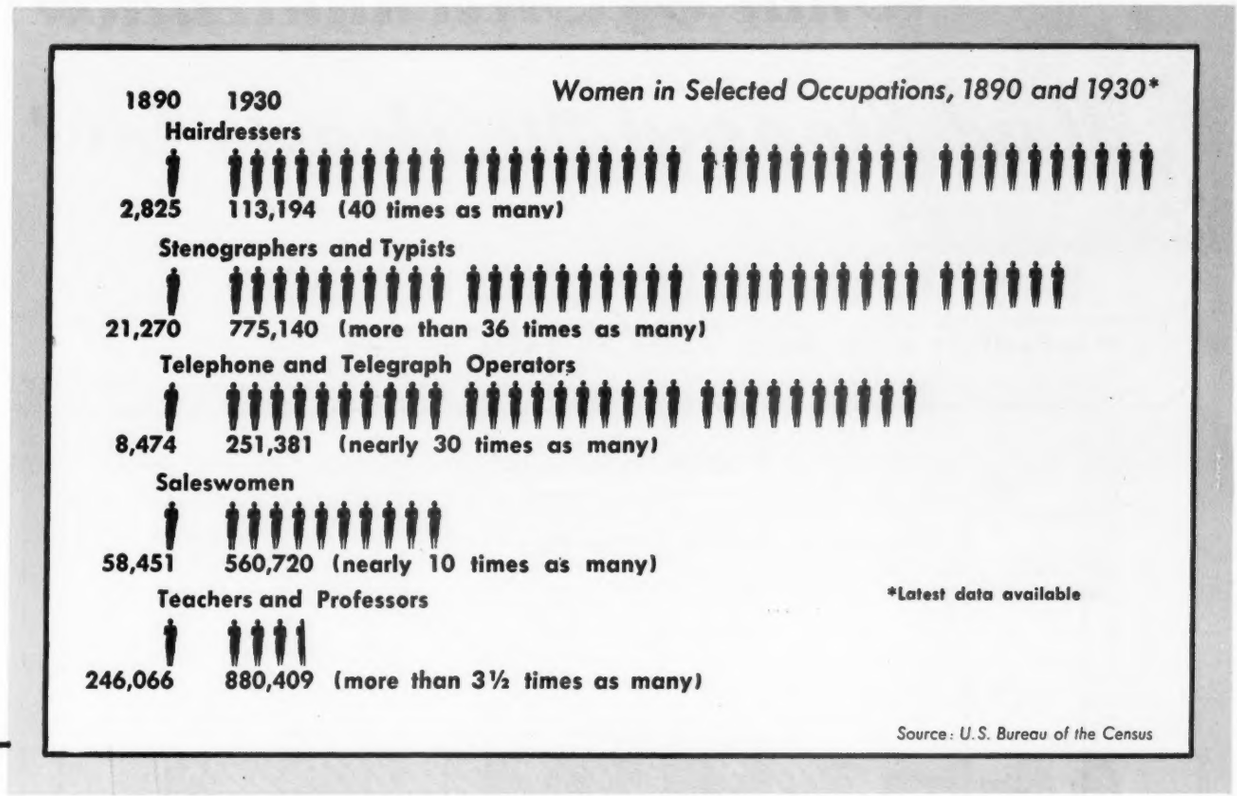
**Latest data available.*

Sources: U.S. Bureau of the Census; Factory

Everybody knows America's record in mechanization — always more and better machines. Census figures show that, despite this greatly increased mechanization, employment has gone up 233 percent in the steel industry since 1880; 154 percent in printing and publishing since 1890; 56 percent in the food industries since 1929. Between the censuses of 1920 and 1930 the number of stenographers and typists increased 32 percent; bookkeepers, cashiers, and accountants increased 27 percent

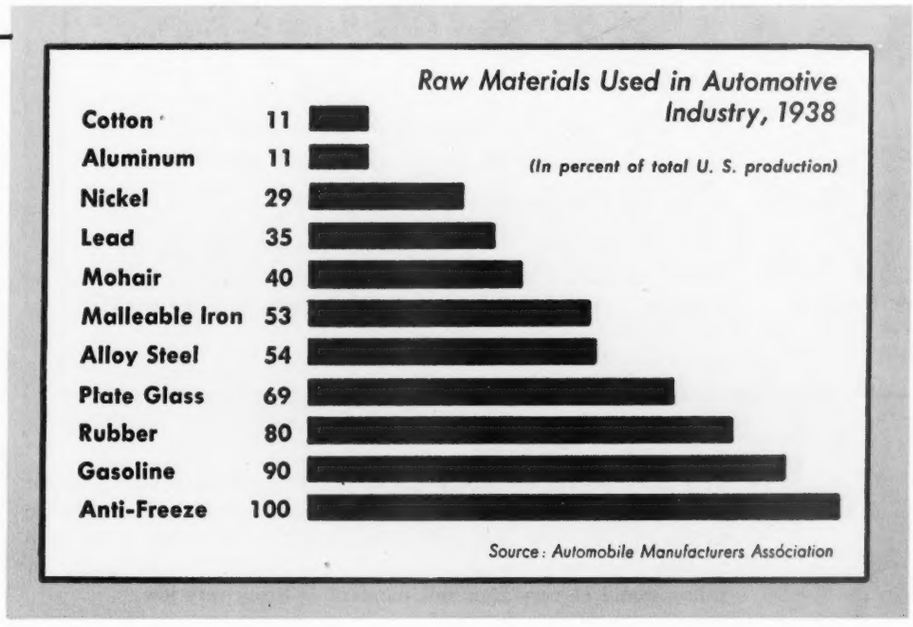
Luckily for defense, American industry knows all the ins and outs of mechanization. It has a running start on the road to low-cost, effective manufacture of armament

★ Mechanization has increased opportunities for women


Women in Selected Occupations, 1890 and 1930*
1890 1930
Hairdressers
2,825 113,194 (40 times as many)
Stenographers and Typists
21,270 775,140 (more than 36 times as many)
Telephone and Telegraph Operators
8,474 251,381 (nearly 30 times as many)
Saleswomen
58,451 560,720 (nearly 10 times as many)
Teachers and Professors
246,066 880,409 (more than 3½ times as many)
*Latest data available
Source: U.S. Bureau of the Census

Since 1890 the number of women employed in certain occupations (see chart) has increased from 3½ to 40 times, depending upon the kind of job. These increases could not have come about unless mechanization had created the equipment these women use, unless mechanization had provided the purchasing power that enables the American people to make use of their services

★ New industries build up jobs in old industries

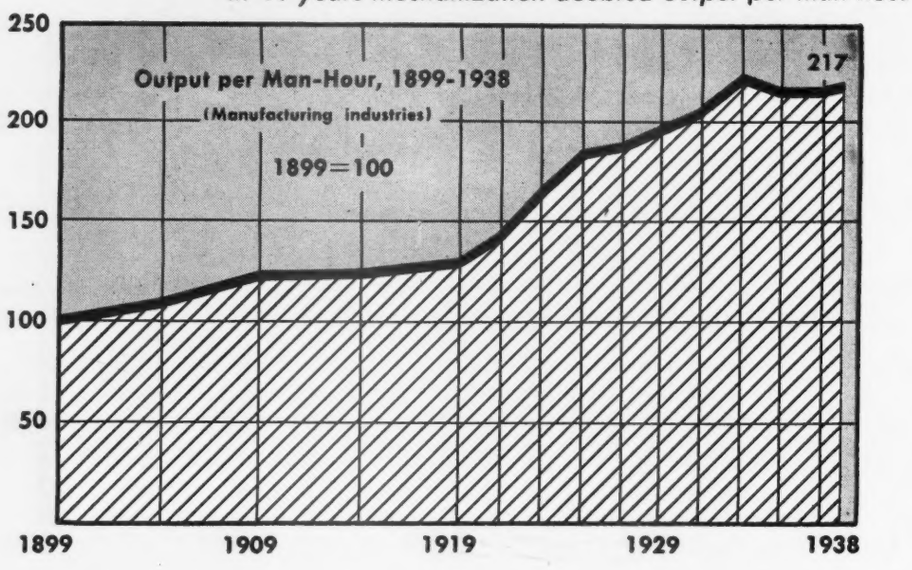


No industry is self-sufficient. Every new industry has to draw on old industries for materials and supplies. The automotive industry, for example, is responsible for the consumption of 90 percent of all gasoline made in the United States, 80 percent of all the rubber, 69 percent of the plate glass, heavy proportions of many other products, even 11 percent of all cotton. The automotive industry is entirely responsible for the new product, "anti-freeze," 100 percent of which it uses

What If Mechanization Had Stopped 40 Years Ago?

★ **Industry's work week would be twice as long**

In 40 years mechanization doubled output per man-hour



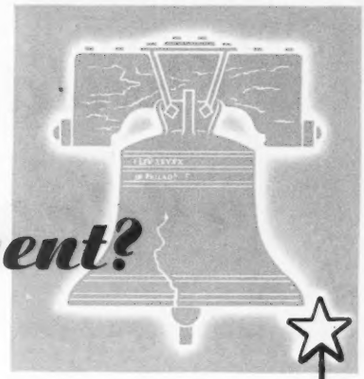
Source: National Industrial Conference Board

Today's production with the equipment of 1899 would require a work week of 77 hours

Source: Factory

New and improved equipment has more than doubled industry's output per man-hour during the past 40 years. Today, if industry had to make all its products with 1899 equipment, industry's employees would have to work 77 hours per week. It is easy to see that without mechanization prices would be very high and standard of living very low

Would Lower Taxes Create Employment?



★ **Yes. Industry could make thousands of jobs**

Industry gets its income from the sale of its products. The less of its sales dollar it has to pay for taxes, the more it can spend for other things, or the lower the prices of its products can be. In 1929 industry spent 1.7¢ of each sales dollar for taxes; in 1937 it spent 3.4¢. Had the 1929 rate been in effect in 1937, industry would have spent $1,000,000,000 less for taxes. If this amount had been used to modernize industry's equipment, 200,000 jobs would have been created in durable goods plants. (The annual output per employee in durable goods industries is $5,000)

Taxes Paid, Manufacturing Industries, 1929 and 1937

1929 (1.7¢ of sales dollar) $1,160,614,000

1937 (3.4¢ of sales dollar) $2,000,000,000

Each symbol represents $100,000,000

Source: National Industrial Conference Board

At 1929 rates, taxes in 1937 would have been

$1,000,000,000

Which would have meant a saving of

Each symbol represents $100,000,000 **$1,000,000,000**

Had industry used this saving to modernize its equipment, it would have made these jobs in plants that make durable goods

200,000 **Annual output per employee in durable goods industries is $5,000**

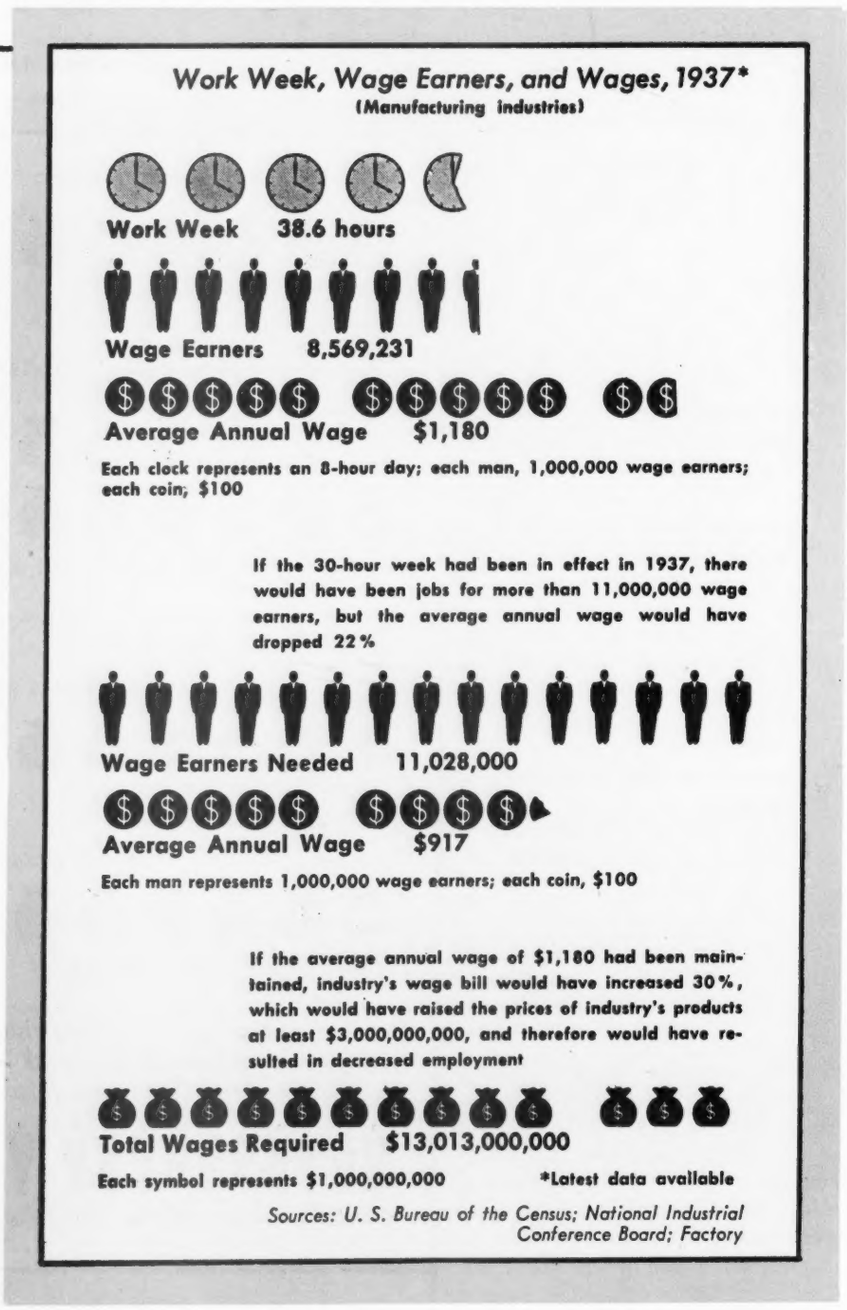
Source: Factory

Taxes will go higher because of defense, and the taxes that will pay for defense will be vitally necessary. How important it is, therefore, that other government expenditures be reduced to make the tax burden as light as possible

Could Industry Adopt the 30-Hour Week?

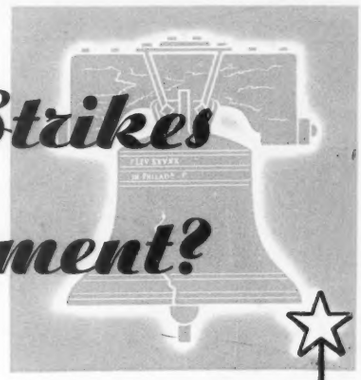
★ **Not without lowering living standards**

Experience shows that only so much of industry's income can go for wages. Bills for equipment, materials, fuel, supplies, transportation, rent, and taxes have to be paid. What's left over is available for wages, salaries, dividends, and rainy-day savings accounts. The amount paid in wages alone averages around 60 percent. In 1937, this 60 percent amounted to $10,113,000,000, an average of $1,180 per worker per year. The work week was 38.6 hours. If it had been only 30 hours, more workers would have been required, but each worker (new and old) would have averaged only $917 per year. If industry had tried to pay all 30-hour workers at the $1,180 rate, almost $3,000,000,000 more would have been required. The money just wasn't there


Work Week, Wage Earners, and Wages, 1937*
(Manufacturing industries)
Work Week 38.6 hours
Wage Earners 8,569,231
Average Annual Wage $1,180
Each clock represents an 8-hour day; each man, 1,000,000 wage earners; each coin, $100
If the 30-hour week had been in effect in 1937, there would have been jobs for more than 11,000,000 wage earners, but the average annual wage would have dropped 22%
Wage Earners Needed 11,028,000
Average Annual Wage $917
Each man represents 1,000,000 wage earners; each coin, $100
If the average annual wage of $1,180 had been maintained, industry's wage bill would have increased 30%, which would have raised the prices of industry's products at least $3,000,000,000, and therefore would have resulted in decreased employment
Total Wages Required $13,013,000,000
Each symbol represents $1,000,000,000
*Latest data available
Sources: U. S. Bureau of the Census; National Industrial Conference Board; Factory

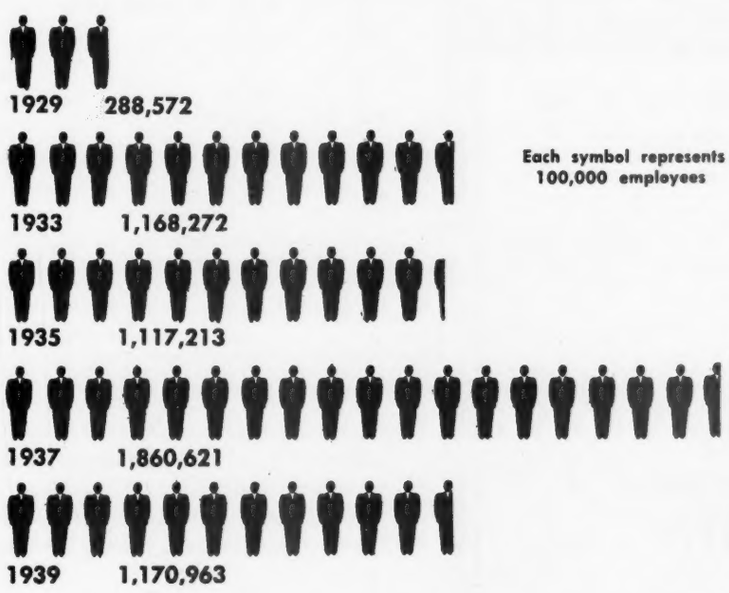
Even without the added production requirements of defense, industry could not adopt the 30-hour week. Our defense requirements now make it unthinkable

Would Fewer Strikes Mean More Employment?



★Yes. Fewer man-days would be lost

Employees Involved in Strikes, 1929-1939



Man-Days Lost Through Strikes, 1929 and 1939

Average Number of Man-Days Lost per Worker, 1939

Each symbol represents 1 man-day lost

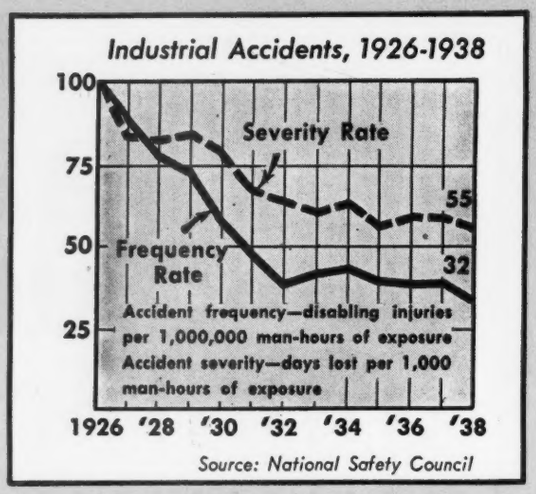
Sources: U. S. Department of Labor; Factory

The only way things are made is by work. Not nearly enough things are made that everyone can have a high standard of living. All the man-days of work lost, whether because of strikes or other reasons, halt the forward movement, which must not be halted if America is to get where it wants to go

If America is to be successful in her preparations for defense, there must be no serious losses in man-days of work. The nation cannot afford them

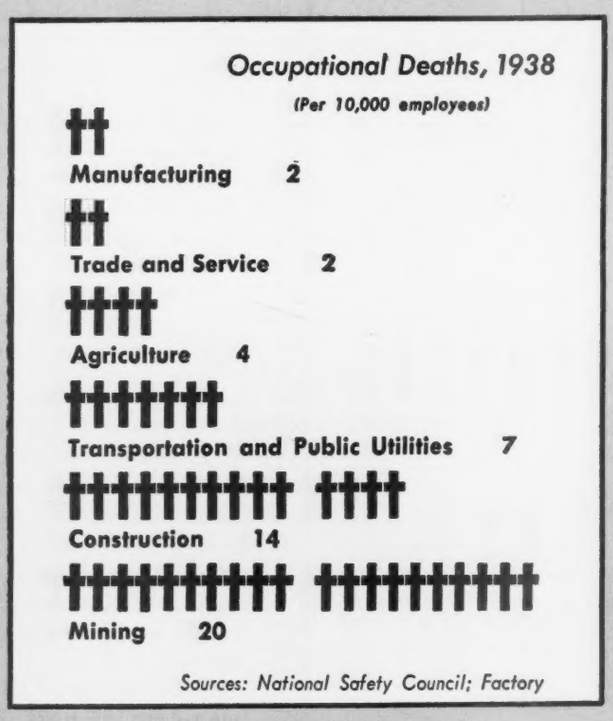
Can Industrial Progress Be Made Safely?

★ **Yes. Accidents in factories are on the decline**



All the evidence points to even fewer accidents than we now have in industry. For years the severity and frequency of accidents in industry have been declining. There is every reason to believe that they will decline further

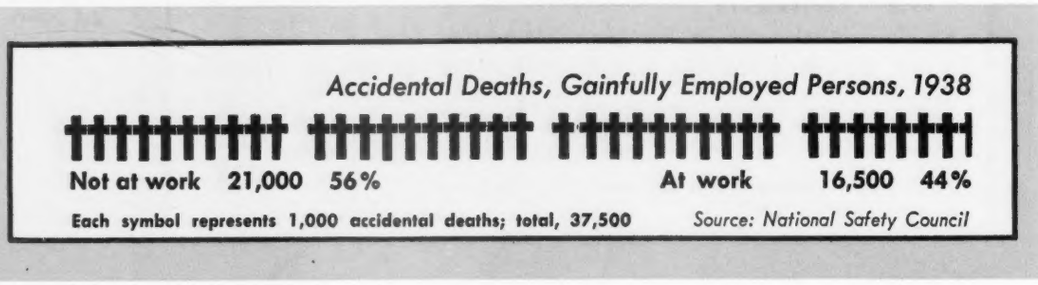
★ **Yes. Factories have the best safety record**



In America's factories, the worker is safer than the worker in agriculture, transportation, construction, and mining

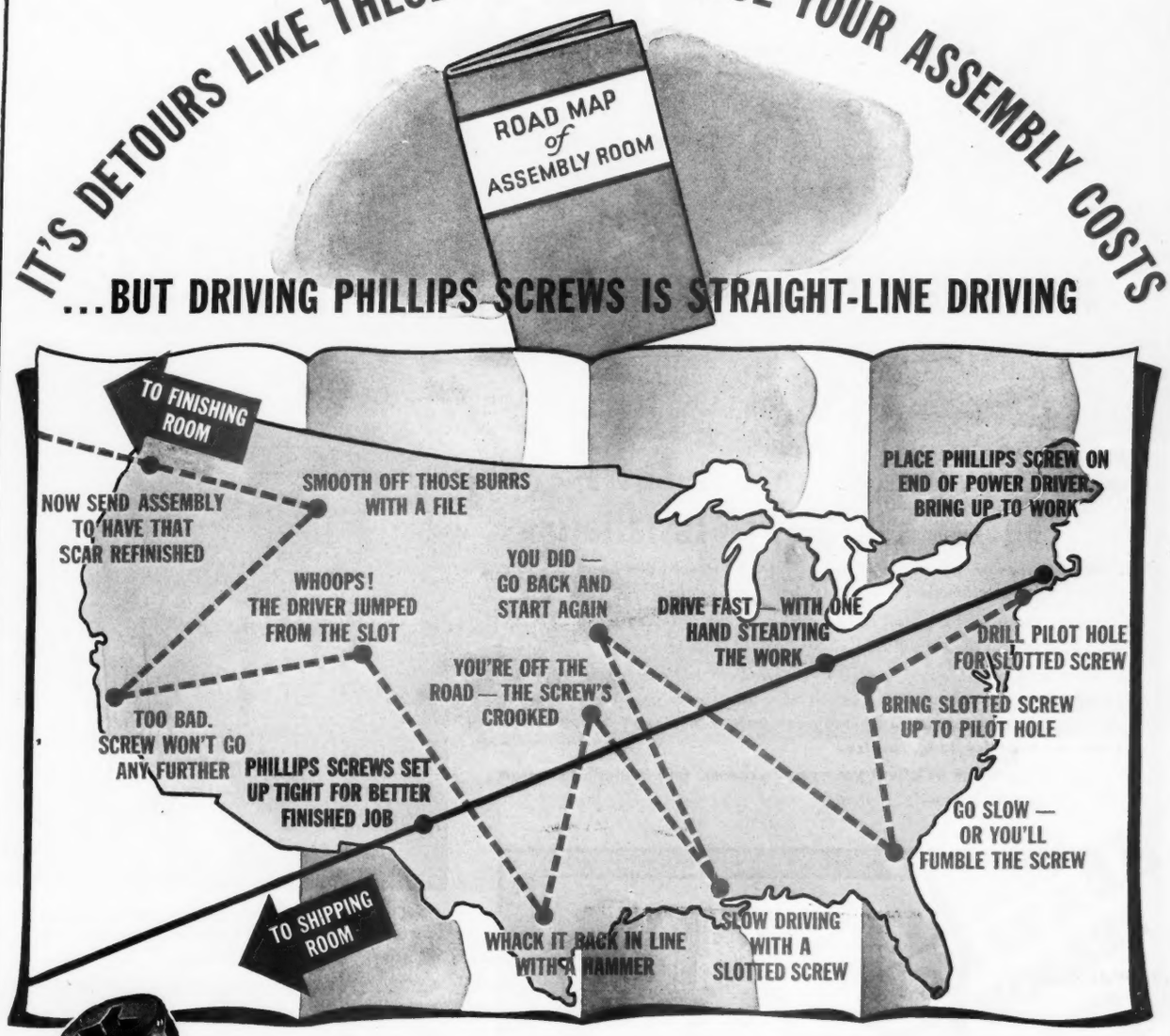
When the worker is laid off, or goes on vacation —that is, when he spends time away from the factory—he is not as safe as when he is at work

★ **Yes. Fatal accidents off the job exceed those at work**


Accidental Deaths, Gainfully Employed Persons, 1938
Not at work 21,000 56%
At work 16,500 44%
Each symbol represents 1,000 accidental deaths; total, 37,500
Source: National Safety Council

IT'S DETOURS LIKE THESE THAT INCREASE YOUR ASSEMBLY COSTS

...BUT DRIVING PHILLIPS SCREWS IS STRAIGHT-LINE DRIVING


ROAD MAP of ASSEMBLY ROOM
TO FINISHING ROOM
NOW SEND ASSEMBLY TO HAVE THAT SCAR REFINISHED
SMOOTH OFF THOSE BURRS WITH A FILE
PLACE PHILLIPS SCREW ON END OF POWER DRIVER. BRING UP TO WORK
WHOOPS! THE DRIVER JUMPED FROM THE SLOT
YOU DID — GO BACK AND START AGAIN
DRIVE FAST — WITH ONE HAND STEADYING THE WORK
DRILL PILOT HOLE FOR SLOTTED SCREW
YOU'RE OFF THE ROAD — THE SCREW'S CROOKED
BRING SLOTTED SCREW UP TO PILOT HOLE
TOO BAD. SCREW WON'T GO ANY FURTHER
PHILLIPS SCREWS SET UP TIGHT FOR BETTER FINISHED JOB
GO SLOW — OR YOU'LL FUMBLE THE SCREW
TO SHIPPING ROOM
WHACK IT BACK IN LINE WITH A HAMMER
SLOW DRIVING WITH A SLOTTED SCREW

Phillips Recessed Head Screws cut assembly time an average of 50%. Driver and screw fit — no driver slippage with power drivers, more contact for easier turning, no burrs. Phillips Screws set up tighter without pilot holes, and with no danger of split heads.

How much would a 50% saving in assembly time mean in your plant? Add the saving in number of screws used (or smaller, lower-cost sizes), the elimination of expense for locking devices and the freedom from returns due to loosening of the product in use . . . and you'll see why thousands of manufacturers find it costs less in both time and money to use Phillips Screws.

PHILLIPS RECESSED HEAD SCREWS...

WOOD SCREWS • MACHINE SCREWS • SHEET METAL SCREWS • STOVE BOLTS
SPECIAL THREAD-CUTTING SCREWS • SCREWS WITH LOCK WASHERS

Speed Product Deliveries by Cutting Assembly Time

U. S. Patents on Product and Methods Nos. 2,046,343; 2,046,837; 2,046,839; 2,046,840; 2,082,085; 2,084,078; 2,084,079; 2,090,338. Other Domestic and Foreign Patents Allowed and Pending.

American Screw Co., Licensor, Providence, R.I.
Continental Screw Co., New Bedford, Mass.
Corbin Screw Corporation, New Britain, Conn.
The Lamson & Sessions Co., Cleveland, Ohio
National Screw & Mfg. Co., Cleveland, Ohio
Parker-Kalon Corporation, New York, N.Y.
Pheoll Manufacturing Company, Chicago, Illinois
Russell, Burdsall & Ward Bolt & Nut Co., Port Chester, N.Y.
Scovill Manufacturing Co., Waterbury, Conn.
Shakeproof Lock Washer Co., Chicago, Ill.

CLARAGE Offers You A-1 Equipment and Over 25 Years of Experience

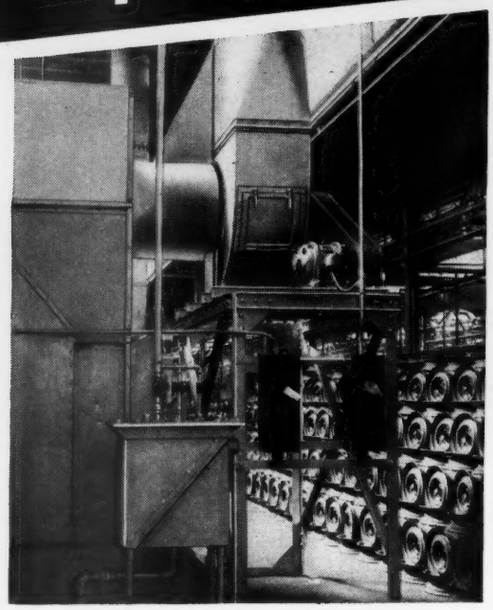
— a Proven Way to Cut Costs on Fan and Blower Installations

Dust or fumes to be removed—ventilation—cooling—heating—air required in production . . . What are *your* needs?

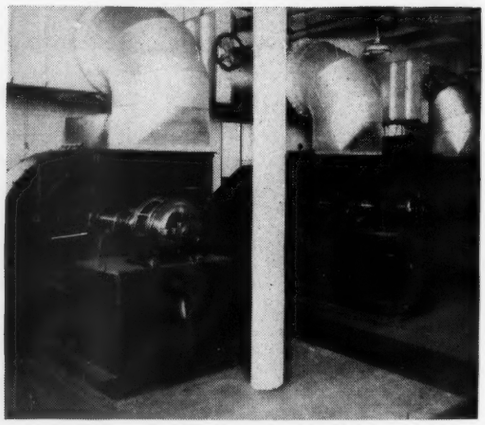
Every year — for over *twenty-five* — Clarage has been solving all kinds of air handling and conditioning problems.

Turn to Clarage and you get: *1. Practical help in planning your installation, assuring satisfactory results and every possible economy. 2. The finest fan equipment money can buy — designed to cut power costs — built for long service.*

Write us about your requirements, and immediate action will follow.

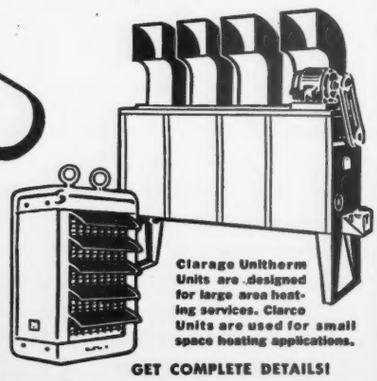


Clarage Exhaust Fans removing fumes from paint spray booths in an automobile plant.



Clarage High-Pressure Blowers used on production in an oil refinery.

HEATING SEASON *Coming Soon!*



Clarage Unitherm Units are designed for large area heating services. Clarco Units are used for small space heating applications.

GET COMPLETE DETAILS!

Many times more efficient than direct radiation, Clarage unit heaters REDUCE FUEL COSTS. Ideal for heating one dept. or complete plant — using steam or hot water. Many operating features found nowhere else. Easily installed on the floor, or suspended from wall or ceiling.

COMPLETE AIR CONDITIONING
•
COOLING
•
VENTILATION
•
FACTORY HEATING
•
MECHANICAL DRAFT
•
FANS and BLOWERS for INDUSTRIAL NEEDS

CLARAGE FAN COMPANY—KALAMAZOO, MICH.
SALES ENGINEERING OFFICES IN ALL PRINCIPAL CITIES

The entire community of Toledo has a new sense of personal responsibility for taking whatever positive steps are necessary to make things better. New products and new processes of Toledo's industries have made new jobs and new purchasing power

How one city's industry is helping America

When we undertake to learn what industry can do for America, we are handicapped by the difficulty of comprehending facts and statistics that span a continent. It would be much simpler if we might find and examine one typical city—large enough for a fair cross-section of industry, and small enough to fall within the average man's experience and mental grasp.

Toledo, Ohio, is an excellent example of a typical industrial city. It offers in a compact package a sample of our industrial nation. And, for study purposes, it has the added advantage of being a full jump ahead of many cities in the cycle that we are considering. Toledo had its banking troubles and its major labor strife before these troubles were nation-wide. It got its banking situation developed to a working basis, and it constructed a formula for industrial peace before its neighbor cities were forced to face these problems. Its industries learned a year or two ahead of most that their hope for salvation lay in diversifying their markets, in lowering their factory costs, and in developing new products and processes. Today, therefore, Toledo is a case study of what American industry may well hope to be next year

or the year after—if management elsewhere profits by the lessons apparent in this city's experience.

The 1940 census will show 281,000 population—down 10,000 since 1930, which is a nation-wide trend that reflects the decentralization of the cities' residential areas. Native whites are 82 percent, foreign-born whites 14 percent, negroes 4 percent. There are 62,000 residential structures providing 80,000 dwelling units. Of these dwelling units, 47 percent are owner-occupied homes, and 25 percent are free of mortgage.

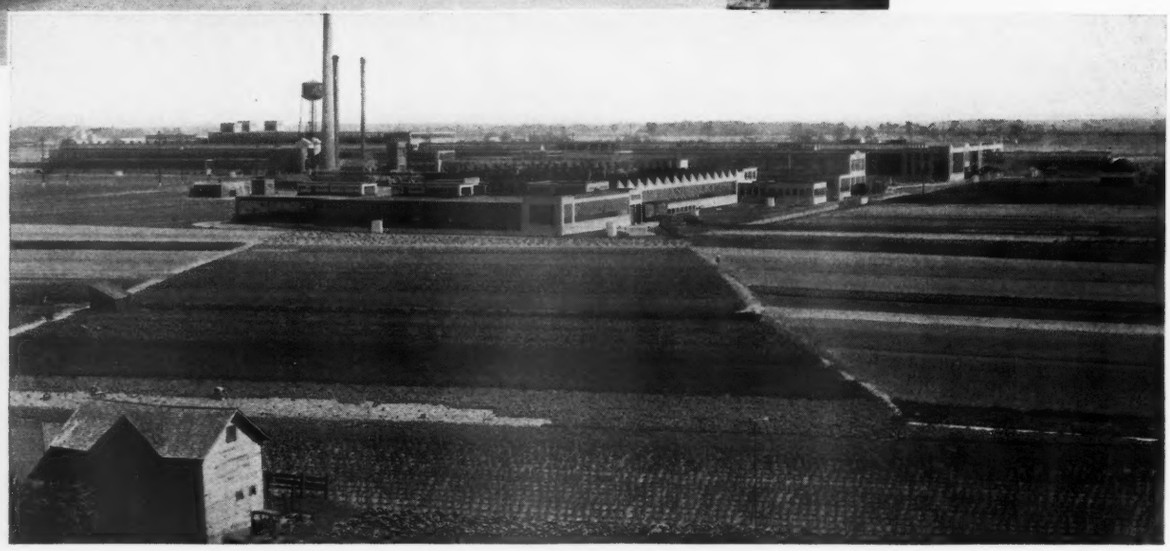
Money to support this population comes chiefly from industrial employment. The city has 700 industrial plants embracing more than 300 different lines of manufacture. The three major industries are transportation, automotive, and glass.

Toledo's location at the corner of the lower Great Lakes accounts for 16 main-line railroads converging here, employing 7,500 to 10,000 workers. To Toledo docks these roads bring soft coal en route to ports on the Upper Lakes. The long fresh-water freighters return laden with iron ore for Ohio and Pennsylvania blast furnaces. This traffic makes Toledo the sixth U. S. port, the world's largest soft-coal port.

Only one Toledo plant makes finished motor cars and trucks—Willys-Overland Company, giving jobs to 5,000 where at its mid-20's peak it used between 23,000 and 25,000 men. But the city has 73 plants producing parts and subassemblies for Michigan's giant factories a few miles to the north.

Finally, the city is the nation's undisputed glass capital. It has headquarters and several plants of "largest" companies—Owens-Illinois Glass Company, containers;

Toledo's industries learned a year or two ahead of most that their hope for salvation lay in diversifying markets, lowering factory costs, and developing new products and processes. Willys-Overland is staging a come-back with a car that sells for less than any of the All-Three group



Libbey-Owens-Ford went into the depression with the sale of its products primarily dependent upon construction. It emerged with plate glass diversified into many different kinds of products

Libbey-Owens-Ford Glass Company, flat glass; Owens-Corning Fiberglas Corporation, spun glass.

But besides these plants of the predominant industries, the city has such companies as Toledo Scale Company, The DeVilbiss Company, Bunting Brass & Bronze Company, Surface Combustion Company, Toledo Machine & Tool Company, National Supply Company, Unitcast Corporation, Schwartzbaugh Manufacturing Company, Woolson Spice Company, and the Ohio Fuel Gas Company. There are five large gasoline and oil refineries served by pipelines from producing oilfields to the southwest. Like the nation of which we are examining it as an urban sample, Toledo is industrially diversified.

In 1929 Toledo was riding high, wide, and handsome. In 1932-3 it scraped on bottom. Then its leaders applied their minds to the problem, developed a painstaking program of rebuilding its business, its employment, and its prosperity. Let's examine a few statistics, keeping in mind that 1929 was Willys-Overland's last big year.

1929	*1933*	*1937*	*1940 (First 4 months)*
Business activity index (University of Toledo, Bureau of Business Research)			
120.4	63.5	92.8	92.1
Factory employment index (Toledo Merchants & Manufacturers Association record of 54 selected plants)			
39,927	16,180	28,871	24,300
Cases on direct relief			
(*1930*)2,100	14,815	5,048	4,000
Bank deposits (Toledo Clearing House)			
$191,394,000	$57,811,000	$117,979,000	$140,000,000

A good many factors contributed to the desperate plight in which the city found itself in the early 30's. Foremost, of course, was the world-wide depression. Second came the community's unbalanced dependence upon the automotive industry, with 30 percent of its factory workers formerly employed in one big automobile plant which was having an even harder time than its principal competitors. Third, in the summer of 1931 five banks—including two of the largest in town—suspended business, more than a year before most big cities were hard hit. Fourth, labor and management flew at each other's throats in 1934, instead of waiting until such warfare became nationally fashionable in 1937.

Reams have been written about the Toledo labor disturbances of the NRA era. Much of the publicity was due to the fact that the Toledo labor situation developed so early. The town had a series of strikes. Strikes with violence, one of them requiring the National Guard to suppress riots. Finally, to climax the series, the threat of a public utility strike which a good many leaders believed would plunge the town into a practical revolution.

The blame cannot fairly be assigned to just one side. Both the employers and the workers earned their shares. The town in those days had a reputation for paying low wages, though a lot of folks today say this reputation was never deserved. Beyond argument, Toledo had its full share of union-hating employers who stubbornly cherished the traditional position of "I'm not going to let somebody else tell me how to run my business." And because it was a bottleneck in the far-flung automotive industry, it attracted a type of labor leadership that was more concerned with the national politics of unionization than with the immediate welfare of the Toledo locals that were being organized. Whosesoever the blame, the city's name became a popular synonym for picket-line rioting, and its traditional customers in New York, Detroit, and Chicago scrambled to find suppliers in other cities who could give better assurance of on-time deliveries.

Thus strikes aimed at getting the worker better pay or a greater share of control over his working conditions, actually switched business from local plants, and transferred thousands of men and women from payrolls to relief rolls. Sales volumes, employment figures, corporation surpluses—all of these dwindled in Toledo at a rate far exceeding the national average of those universally lean years. The community was whirling downward on a vicious spiral, with nobody confident he knew the way to slow its progress toward economic chaos.

The darkest hour was on the brink of the Toledo Edison strike. Into town to stave off trouble flew Edward F. McGrady, then Assistant Secretary of Labor and the nation's foremost conciliator. McGrady had been practically a Washington-Toledo commuter for months, frankly declared he was tired of helping Toledo sweep its rubbish under the bed. In between holding hands with the electrical workers and their bosses, McGrady sat down with the local newspaper editors and painted a picture of a Toledo in which strikes would be scarce because there would be some place for aggrieved individuals or organizations to bring their troubles before they reached the shin-kicking stage. With a few broad strokes he roughed in a board that could perform the duties he had in mind, and that could probably permit him a few more days per month back home with his family.

From that sketchy start developed the Toledo Industrial Peace Board, which has been written and talked about as much as any labor-relations program in the country. It is an arm of the municipal government, consists of citizen-members representing industry, labor, and the general public. Its duty is to answer all calls for aid, and to offer its services for mediation when it sees trouble brewing. Present and long-term paid executive is Edmund Ruffin, former labor reporter on a local daily. In practice, Ruffin *is* the Peace Board, manages to handle most labor difficulties single-handed. Only once in 1939, and not at all as yet in 1940, has Ruffin called a panel of members to help iron things out.

The Peace Board was formed late in 1935, was not really accepted by management and labor until well into 1936. Each subsequent year has seen its services called for by a smaller number of disputes—good evidence of the maintenance of peaceful relations, since the board gets into practically every employer-employee ruckus in town. In 1937 the board handled 95 disputes involving 12,000 employees. In 1938 it handled 75 disputes involving 12,000. In 1939 it handled 35 disputes involving 4,000. In these three years it settled without strikes, 66, 45, and 23 disputes. It settled in the same three years 14, 6, and 10 strikes. Some Toledo leaders are openly worrying lest the increasing industrial tranquility induce

the city government to disband the Peace Board; frankly, these men believe that things would be much worse without it.

Impartial observers credit a lot of the city's progress in industrial relations to its early start. Usual experience is that unionization of a town causes knockdown, drag-out fights between management and unions, followed by a few years of bad blood and bickering. Toledo had its worst troubles back in '34 and '35, is consequently two years further along the road to peace than those communities that did not blow their tops until '37. But also it must be admitted that workers and bosses both developed out of the bitter scrapping a desire to get along amicably.

The result is that they managed to halt the centrifugal force that was tearing their community to bits, and actually transformed their yearning for peace into a cement for binding the pieces together again. The program of rebuilding the community did not cease with forming a body to promote industrial peace. The fact is, the troubles of the depression-bottom years jolted the entire community into a new sense of personal responsibility for taking positive steps to make things better.

Following several successive city administrations which assayed out too much politics per gross ton, the voters shifted the municipal government to a city-manager, small-council form at the beginning of 1936. Since then the city's finances have been tremendously improved, and the service to the public greatly increased. Taxes were substantially reduced both through reductions in the tax rates and also in assessed valuations. It is notable that, through the combination of lower taxes and better employment, current taxes are being paid and people have been paying up the taxes on which they became delinquent during the lean years. Since 1929 the city's bonded indebtedness has been reduced from $29,000,000 to $24,000,000.

As good a picture as any of the improvement in the over-all economic condition of the city is that given by relief statistics. It should, however, be kept in mind that relief figures are tricky, and require an intimate knowledge of local conditions in a given year for full interpretation. If, for example, a given year should experience four seasonal flurries of employment and four sharp declines with layoffs, this unusual activity in hiring and firing would result in a tremendous apparent increase in number of relief cases. The reason: the individual is counted as a relief case each time he is placed on the relief roll, regardless of duration of his stay there. It is, therefore, advisable to read relief statistics (the negative side of industrial activity) in conjunction with employment statistics (the positive side of industrial activity). Here are these two sets of figures for Toledo, covering the past five full years and estimates for early 1940:

Year	*Yearly averages of cases on direct relief*	*Averages of employment in 54 selected plants*
1935	22,017	24,525
1936	8,315	25,525
1937	5,048	28,871
1938	7,964	18,064
1939	6,894	21,740
1940	(*5 months*) 4,000	(*4 months*) 24,300

In the interval since the town scraped bottom, its industry has made important progress in a number of directions. One is in diversifying its activities and its markets. A survey issued by the Bureau of Business Research of Ohio State University in 1939 compares wage balances among Ohio's eight largest counties. The single-industry emphasis varies from the high point of 61.3 percent of all payrolls from one industry to a low of 14.1 percent. The high county is Summit, containing Akron, and its predominant industry is, of course, rubber. Significantly the low is Lucas County, containing Toledo, and its largest single source of payrolls is iron and steel production. Lucas County also shows 13.7 percent from service industries, 13.6 from trade, and 11.4 from vehicles. Thus 52.8 percent of total payrolls is derived rather evenly from the four major classifications, leaving 47.2 percent divided among all other classifications. Remember that, back at the peak, Willys-Overland alone accounted for approximately 30 percent of all industrial employment in the city, and presumably about the same percentage of total industrial payroll.

HUSTLING TO BROADEN THE BASES

One reason for the present-day diversity of Toledo industry is that its manufacturers were thoroughly scared by their depression experience. In consequence they have hustled around finding ways to broaden the bases upon which their operations rest. The automotive parts companies have been particularly active in this direction. For instance, both Electric Auto-Lite Company and Doehler Die Casting Company have developed sizable markets that are not dependent upon the internal combustion engine. Their achievement is paralleled in almost every parts plant in town.

It is difficult to draw before-and-after examples of cost economies using any depression year as the dividing line. Rarest of factory phenomena is achieving at one stroke a major reduction in process or production costs. Most reductions in this field evolve over a period of years, at any given moment represent the cumulative effect of a hundred almost incidental short-cuts. The individual small-scale improvements are preserved neither in the records nor in the management's memory.

Typical of the normal, inch-by-inch process was the remark of one Toledo manufacturer. "Well, we used to charge $100 for one big seller 15 years ago. Now we have a far better unit for $65, make the same percentage of net profit on it, and sell lots more of them. We just nickeled and dimed it over the years. When we put the process on a continuous conveyor line, we cut about a dollar off our cost sheets. Our machine shop developed a machine to shape twice as many pieces at a time, and that was good for 45 cents. High-speed alloy cutting tools knocked off another 30 cents. Substituting a plastic housing at one point peeled off 60 cents, as I recall it. We got the rest of the savings the same hard way, maybe a dollar or two a year—and we are still doing it."

Best Toledo instances of the spectacular type of saving are further back in time. Old Mike Owens, whose name persists in all three of the big local glass companies, did them, and he has been dead these many years.

His bottle machine displaced, to a great extent, a hand trade, bottle making—and with it a great amount of child labor. His continuous flat-glass process took much of the cost out of window glass—and most of the wavy lines. Pernicious technological changes, those, by the standards of folks who fear labor-saving machinery. But in the 30 years during which these two major process improvements came, the number of wage-earners gainfully employed in glass making increased by 15,000 throughout the United States. And individual companies' records indicate that the increase in employment is continuing at a rate to exceed the proportionate increase in national population. In a word, people are using more glass because it is cheaper and better. They are using so much more glass that it takes more men to make it than back in the days when glass making required lots of man-hours and produced an inferior product far more expensive than present price levels.

Just as indicative of the same general process—and much easier to find—is the succession of new products which have come from research, and which have brought new sales totals and new jobs. Practically every plant in Toledo can cite at least one new item which its laboratories have developed in recent years to give it something new to sell.

Start anywhere in town, ask "What new products are helping you to pay better wages to more men?" The answers differ in detail, but are identical in their general outlook.

DeVilbiss, for example, started more than 50 years ago making atomizers to spray the nose and throat. The company got into the paint spray gun field in time to capitalize on quick-drying lacquers. Product improvements? A steady increase in knowledge of how to lay an even, optimum coating on a given surface so that many a product that used to require two to five coats now does nicely on two.

SAVE LABOR, INCREASE EMPLOYMENT

New products? Well, there's the entire family of automatic and semi-automatic spray machines. These paint a product as it moves along a conveyor, shut off and on at precisely the right instant. Of course they save labor —that's how they're sold. But they have made a sprayed finish cheaper than many a less desirable type of old-time finish, have made products cheaper priced and otherwise more attractive, have thus substantially increased employment throughout other departments.

New markets? Yes. One example—DeVilbiss found a better way to do a job in a food industry that for centuries had been done by hand. Now practically every big producer of that food uses a full-automatic spray machine, saves time and expense, and does a better job than with old-fashioned methods.

Toledo Scale's urea formaldehyde plastic story has been told so many times since the depression that it is part of our industrial folklore. The company's scale housings were being made of cast iron with a white porcelain enamel finish. They were so heavy that a robust young salesman could hardly more than lug a sample from the curb into a prospect's store. Handling costs in the plant, and shipping costs on finished product were too high for comfort. So the company set up a research fellowship at Mellon Institute, presently had its plastic which it calls Plaskon. This provides a durable and attractive scale housing at a fraction of the former weight. Redesigning the scales made them easier to sell.

Also from the research baby, Plaskon, came the Plaskon Company, now one of the world's largest producers of urea-plastics—a new company which has provided nearly a thousand new jobs which were nonexistent before. Recently a neighborly exchange took Plaskon over to Libbey-Owens-Ford.

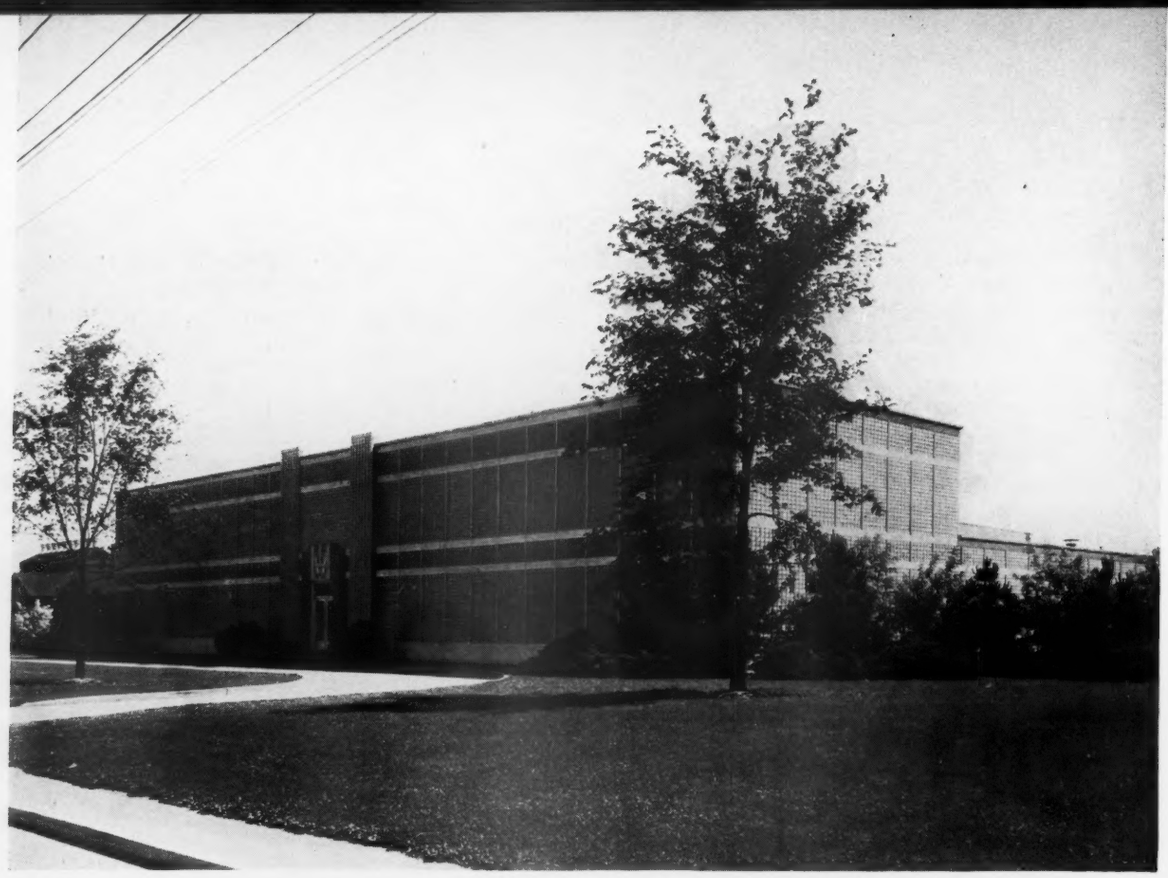
Likewise, consider Toledo Porcelain Enamel Products Company, offshoot of the scale company's porcelain finishing department, now one of the industry's leaders, employing hundreds on jobs that have come from aggressive expansion in that field.

Now, also, Toledo Scale is in a new factory built to meet its new needs. Thus, from one company's research activities intended to improve its own product came two additional businesses; and an expansion of the parent company's business which made possible the building of a long-needed new plant. Who says research is the enemy of employment?

Owens-Illinois Glass Company was originally a bottle maker. In 1931 it developed two new products—fiber glass and glass blocks. In 1934 it moved the fiber division into a plant at Newark, Ohio, and began making filters especially for air conditioning, and heat insulation and, later, electrical insulation, retainer mats for storage batteries, and fireproof fabrics. In 1938 it pooled its fiber activities with those of Corning Glass Company, formed Owens-Corning Fiberglas Corporation. The glass block became an important building material, now occupies a plant at Muncie, Indiana. Thus two more factories are giving employment—both of them Toledo-owned, though out of town.

In 1930 Owens-Illinois started its packaging research laboratory with two scientists and a part-time designer. Five years later it built a three-story laboratory where it has a staff of 50 people. The lab has developed some spectacularly successful lightweight glass containers. It proved that the strength of a glass container depends on the manufacturing process, not on the thickness—thus overcoming the weight objection which has sometimes held back glass in competition with cans. It created for shipping brewers the money-saving "packie," a no-deposit non-returnable beer bottle that weighs 7⅜ oz. instead of 12 oz. It reduced milk bottle weights, thus permitting a bigger payload for the delivery truck—and for the driver's hand basket. It developed milk and carbonated beverage bottles with color applied and fired into the glass—saving costs and increasing the sales pull. Every one of these developments produced more sales, and more jobs in O-I factories.

Libbey-Owens-Ford Glass Company, or rather the two constituent companies merged in 1930, were primarily makers of window glass and plate glass for buildings, although as the automobile industry developed the universal closed model, the flat glass manufacturers began to sell more and more glass for automobiles. Up to 1926 safety glass was a novelty and not very good, since the



Out of this Owens-Illinois laboratory have come spectacularly successful lightweight containers. Every one of these developments meant more sales and more jobs in O-I factories

cellulose nitrate sandwiched between the two thicknesses of glass turned yellow in a few months of sun exposure; also, equipping a big car all around would have cost more than $300. Libbey-Owens-Ford was using a sheet of stable cellulose acetate for its interior layer, and quantities went up so fast that costs permitted making it standard equipment. For 1940 cars, however, after six years of cooperative research, a still better plastic was developed, using polyvinyl acetate, for the inner layer. One of the L-O-F plants in Toledo employs hundreds of people whose sole job it is to sandwich together the thin plate glass and the plastic sheets. Those jobs could not exist until safety glass was developed to commercial perfection by research.

L-O-F went into the depression primarily dependent upon construction. It emerged with plate glass diversified into many different products. A heat-tempered plate glass which can take a terrific beating from impact or temperatures extended markets into fields previously restricted to other materials such as warship portholes, pipeline peepholes, rotisserie windows, gages and instruments and safety enclosures on industrial heat exposures, all-glass store doors. Color was developed in plate glass, boosting sales of plate for mirrors. A heat-absorbing glass reduces glare, cuts cooling costs in air-conditioned buildings. Three glass building materials, two opaque and one translucent, have caught on and are selling in such volume that they make lots of new factory jobs. L-O-F executives, unwilling to divulge details ahead of schedule, say that several equally solid new products are coming up in the immediate future and will provide at least equivalent quantities of employment.

Market research and sales analysis accomplishments are practically as easy to find in Toledo. An obvious example is Willys-Overland. The company went broke during the depression, was completely out of production. A group of men in Toledo thought they saw a need for a lower-cost car than any of the All-Three group, brought one out particularly to reach the folks who previously had to buy used cars or go without. Willys-Overland has been doing well for a newcomer, has sold a lot of cars, lost a little money most years and made a little in one year, but has developed a dealer organization that now promises to put the car in money-making volume into low-income American garages.

Another instance is Libbey Glass Company, tableware subsidiary of Owens-Illinois. Libbey sales executives hunted around, found an opportunity in the premium field. Now Libbey sells, along with high-priced crystalware retailed through upper-bracket stores and commercial lines sold through restaurant and hotel suppliers, a tremendous volume of such package premiums as those decorated glasses that processed cheese can be bought in —decorated, you observe, with the process developed by O-I for milk and ginger ale bottles. Also Libbey makes millions of give-away tumblers for tea and coffee and other beverage brands to offer free along with a big purchase of product. A lot of Toledo workmen are drawing regular pay because of this new market.

Still another example of the beneficial results of research and market analysis can be found in the 34-year-old Surface Combustion Company's nine-acre plant. The company name is synonymous with gas-fired heat-treating equipment, and no special reference need be made to its products in that field. However, the company has also developed and is marketing air-conditioning equipment for both industrial and commercial

applications, and thus has added to jobs and payrolls.

The contributions to better labor relations through the Industrial Peace Board and the mutual education of workers and bosses have already been described. Likewise the handling of relief problems has been indicated by the relief statistics already cited. A tremendous contribution, but one that cannot be metered, came from industrial leadership. Toledo employers really pitch in and handle community responsibilities. Most recent example: After some years of stumbling along with a Community Chest campaign that barely made the grade, the town appealed to three of the biggest men in town—John D. Biggers, president of L-O-F; William E. Levis, president of O-I; Robert A. Stranahan, president of Champion Spark Plug Company. Busy though they were with everyday tasks, they took on this added chore. They put all their power behind it. And the 1940 Community Chest whizzed over the finish line on the final day with 10 percent extra cash above the quota for good measure. With this type of leadership, of course the town has made progress.

Recently, too, Toledo has rejuvenated its Chamber of Commerce and has strengthened it by adding new and factually helpful services. A shake-up in a chamber of commerce is not, of course, major news. Its significance here is that the forces which are making for better industrial and economic development in Toledo are also taking a surprisingly active hand in strengthening the voice of organized business in the community.

Significant of the reborn spirit of the community is its determination to retain and improve its present standing. Toledo people are inwardly proud of what they have accomplished since the bottom of the depression, but also they are genuinely humble because they see so much more to do before their town will measure up to their ideals. In the old, unhappy days of 1934-5 they

Toledo employers really pitch in and handle community responsibilities. Left to right, William E. Levis, John D. Biggers, and Robert A. Stranahan. Presidents respectively of Owens-Illinois, Libbey-Owens-Ford, and Champion Spark Plug Company, they took on the job of putting over the 1940 Community Chest Campaign. It whizzed across the finish line 10 percent over the quota

learned that a dog with a bad name hasn't a chance. Toledo earned a bad name, got it, almost sank under its weight. But shortly after the citizens had turned the tide toward industrial peace and financial rehabilitation, they decided to rebuild their good name.

Organized and sparked by a go-getting advertising man who took the job on not for profit but for civic duty, a new outfit called Toledo Associates assumed the city's public relations job. It has done the job magnificently. Twenty-odd local industries pitch in what money is needed, up to $1,000 a year for the big ones. Toledo Associates keeps the newspaper wire services informed of all business and civic news breaks in town—these would otherwise probably be missed because the nearest bureaus are at Detroit and Cleveland. The unit calls to the attention of publications everywhere the merits of its city, helps them get the whole truth even when it hurt.

The reason why you have read so much in the past about the Toledo Peace Board, and about the Toledo Plan, is primarily because Toledo Associates has been boosting the idea in enlightened manner. Dozens of big stories have come out of Toledo in recent years, mostly by way of the Associates. Don't overlook that, while you were reading these stories, so were the other customers and prospects of Toledo industries and Toledo wage earners. Local leaders not even connected with Toledo Associates give handsome credit, declare that the greatest shift in the entire picture is the way that out-of-town folks who mistrusted Toledo deliveries and workmanship have switched their viewpoint, now give Toledo credit for a better situation than an honest booster can claim for it.

Nor should one overlook the job of civic building and internal public relations that local newspapers have done for years. Recall that when Ed McGrady first proposed the peace board plan, he proposed it to the newspaper editors and they sold it to their town. They have sold their town a succession of constructive programs, have not ducked the duty. They call names and point fingers, whether they are praising or criticizing, whether the object of their attention is an industrial big shot or a labor racketeer. Toledo people today view their city with pride, but also they realistically recognize its shortcomings. Credit for this state of informed public mind belongs squarely to the newspaper men who have taken civic leadership as a normal responsibility of their job.

The town's most enthusiastic boosters would be the last to claim that it should not have gone further. They see hotheads on both sides of the worker-boss relationship, and ignorance thriving in those who refuse to learn. They recognize companies that ignore examples set by their progressive neighbors and contentedly coast along on momentum of bygone years without replacing it with new power.

To learn which Toledo businesses have stood still and are doing no product or process research, ask their neighbors. To learn who is a bit grabby in his pricing, ask his friends. To learn how much lower tax rates could and should be if there had been more economical government during the salad years, go to the city government and get a factual tabulation.

In Toledo, as everywhere, it is easy to find example after example of business men who have not dared hazard their money on new plants, processes, and equipment in the face of unfriendly national policies toward industry. A dozen specific instances cropped up—told in confidence—while the facts for this article were being gathered.

There is no way to arrive at any numerical estimate of how much farther Toledo might have progressed—surely would have progressed—had these drawbacks been removed. Remove negative factors from the equation, and you create a plus factor. Nobody knows how big it would be. Certainly it would be sizable.

But with all its handicaps, Toledo has advanced unbelievably from its low point of eight years ago. Most of its industries are chugging uphill under full power. Its unemployed are getting jobs, at better wages than when they went on relief. Its people's living standards are on the mend. Prospects for industrial peace appear excellent, with the usual allowances for what may develop day after tomorrow.

Industry has done much for the community. It can do still more. Multiply Toledo, our one-city case study, by a figure to raise it to the size of the entire American industrial economy. Then you see what industry can do for America—now.

PLASKON

. . . . world's largest selling Urea-Formaldehyde Plastic

TOLEDO

Outstanding Plaskon Features

1. **PLASKON** is solid molded color. It retains its lustre, will not fade, rust, corrode or tarnish.
2. **PLASKON** may be had in a wide variety of colors—purest white, dainty pastels, brilliant hues, jet black.
3. **PLASKON MOLDED COLORS** range from complete opacity to a high degree of translucence. When molded into lighting reflectors, Plaskon provides maximum illumination without glare.
4. **MOLDED PLASKON** is light in weight. Yet it has great strength, is shatterproof, will not chip and resists breakage.
5. **PLASKON** can be molded into almost any shape—from large housings for fixtures and appliances down to the tiniest buttons.
6. **MOLDED PLASKON** is sanitary—odorless, tasteless, inert. The surface is hard, smooth, easy to clean . . . Does not absorb odors . . . Resists effects of water, oils and organic solvents.
7. **MOLDED PLASKON** has an exceptionally low degree of heat transference and unusually high dielectric strength.

Plaskon has achieved leadership in the plastics industry because of its unique qualities. But another important contribution to this success is the helpful service that Plaskon offers its customers. This includes careful research into problems involved in new applications—aid in designing new products, or redesigning old ones—expert engineering opinion on methods of manufacturing and molding. Plaskon experts are continually striving to improve the materials, methods and equipment that are employed to convert Plaskon into products that possess character, quality and greater sales appeal.

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PLASKON

TRADE MARK REGISTERED

MOLDED COLOR

TOLEDO

The American way of life is based on free initiative and cooperation between all people. This happy combination has produced the highest standard of living in the world—proven it to be the only policy that can bring lasting peace and understanding.

An important part of this American scheme of cooperation is the development of mutual understanding between Industry and the communities where Industry lives and manufactures its products.

Libbey·Owens·Ford is established in Toledo. It has factories in other communities but here it has built three of its largest manufacturing plants; here it maintains its headquarters and its technical building for research and experimentation.

Toledo first attracted the founders of Libbey·Owens·Ford because of its superior geographical advantage and transportation facilities which put America's markets and sources of raw materials at its doorstep.

★ ★ ★

More impressive today than any physical attribute is the spirit of community cooperation that characterizes the new Toledo.

Toledo has had, and will have, problems—serious ones—but through enlivened civic foresight it has developed an amazing capacity for taking hold of community problems and solving them. It deserves a place on any honor roll of civic achievement.

In the past five years it has gone a long way toward solving industrial labor problems with the Toledo Industrial Peace Plan; it has streamlined its government through adoption of the city manager-small council form of municipal administration; and, as recently as April, it again showed the Toledo genius for cooperation when, under the generalship of Toledo men, Toledo concluded its most successful Community Chest drive in 10 years.

This active community cooperation makes Toledo a good place to work. In the past two years alone, Toledo industries have demonstrated their confidence by spending more than $10,000,000 in new and improved manufacturing facilities.

★ ★ ★

Toledo is likewise a good place to live. It offers a fine municipal university with an enrollment of more than 2,000; an outstanding educational playground in its zoological gardens; and a new $2,000,000 library representing the culmination of 100 years of library service in Toledo.

Another example of community enterprise, heralded the world over, is the Toledo Museum of Art. Edward Drummond Libbey, when not busy directing the destinies of this glass business, envisioned a new kind of American museum and worked to develop an appreciation of art among his fellow citizens. His dream fulfilled, the museum now stands first among all institutions for the community interest and vitality it enjoys—a tribute to its long-range program of education for children.

Libbey·Owens·Ford has tried to be, at all times, a good neighbor of the community where it lives and works.

Out of our research laboratories have flowed a constant stream of new and improved glass products: Hi-Test safety plate glass, colorful Vitrolite structural glass, tempered glass, improved plate glass for fine homes, commercial buildings and store windows. All of these and many other L·O·F flat glass products contribute to a better life—more economical, more pleasant, more comfortable.

★ ★ ★

It is our conviction that because our products have done their part in raising the American standard of living and in augmenting the resources of happiness, they are selling in ever-increasing volume. They make their contribution to Toledo through the employment of sound workmanship, the providing of livelihood to good citizens, and the expenditure of the proceeds from productive wealth.

This is our Public Relations Policy—the policy of trying our best to be a "good citizen" of Toledo.

LIBBEY·OWENS·FORD GLASS COMPANY
TOLEDO, OHIO

Main Street in Austin, Minnesota, where an impressive economic upturn may be traced directly to the Hormel annual wage policy

How one industrial plant is helping America

Steady wages in the plant. Sustained purchasing power in the town. Confidence, business growth, rising values, new jobs in the community. That's the story of George A. Hormel & Company, whose annual wage policy has launched an impressive upturn in Austin, Minnesota. Results can be traced directly to Hormel, because this company, employing 3,400 in Austin, is virtually its only industry.

Hormel pumps consistent purchasing power into the mainstream of the city's commerce at a rate above $100,000 a week. Hormel employees, regardless of the number of hours worked in a given week, are assured *52 equal paychecks a year* under the guaranteed annual payment plan, known as "straight time." They can also improve their incomes under the Hormel incentive plan.

Details of the Hormel wage plan have been told by FACTORY (August, 1935, and December, 1936). Our story here is of its effect on Austin's economy. The company and the employees have prospered. So has the town.

Based on former practices (those of 1929) this company's business would now provide 4,927 jobs for Austin people, many of them seasonal or irregular. With the annual wage, not only have 578 seasonal jobs been made regular jobs, but the increased purchasing power of the 3,012 Hormel employees on straight time has been responsible for 130 new jobs outside the plant in the community. Thus 4,927 jobs have become 5,057, hundreds of them far more regular than they used to be.

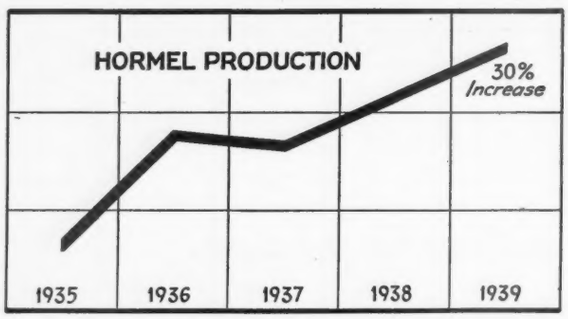
If regularization applied to 4,927 jobs makes 130 new jobs within one community, the same practice, if it could and should be applied nationally, would absorb 1,200,000 unemployed.

All industry is interested in the annual wage. In a small, single-industry city its results may be measured accurately. Let's take a good look at Austin, therefore, through the FACTORY photographer's lens. For here is a town that lives by the year—*really lives*—working and playing, buying and budgeting, with a sure sense of security. All this is possible because of the practices of George A. Hormel & Company.

Dread of the seasonal layoff, one of the worker's worst fears, no longer haunts these huskies. Louis Dahlquist (left), a ham boner, has been with Hormel 20 years, owns his home

Ed. Chrz (center), is a veteran of the Flavor Sealed Division. Dan Attlesey (right), after 4 years in the smokehouse, owns a 1939 Studebaker, is saving to get married

HORMEL AND ITS EMPLOYEES PROSPER THROUGH ANNUAL WAGE PLAN



One dark day in 1931, a worker with a layoff notice in his hand saw his boss go by and called "Hey, you can't do this to me!" Instead of taking umbrage, Jay C. Hormel took thought.

Thus began, as nothing more than a simple "preserve the job" plan, the now-famous Hormel wage policy. With President Hormel scrapping old rules in a constant adjustment to new conditions, it has evolved logically into its present profitable blend of security and incentive.

In 1929 the wavy curve recording Hormel's total

The company has had to sharpen its wits, develop new products, to keep employees busy on annual wage basis. Results include Dinty Moore Beef Stew and all the Hormel soups

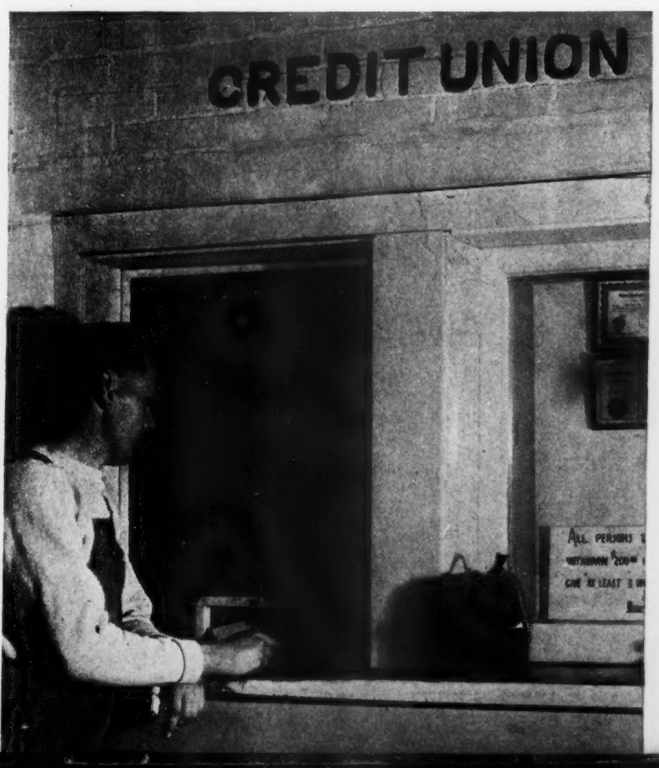
Lower left, Mrs. Inez Taylor Butler, home economics consultant, demonstrates Dinty Moore. Right, straight-line efficiency is exemplified in the ham-boning department

Jalopies are few on Hormel lots. A survey showed, in 1936, 70 percent of workers' cars over 5 years old; in 1940, 17 percent

employment of men varied 51 percent between the February peak and the September valley. In 1939 the curve was an almost straight line with a maximum variation of 7 percent. That is important, but note this: Only 49.2 percent of 1929's workers were *continuously* employed; in 1939 over 98 percent worked steadily. What this plan has meant to the men is shown in this recent one-month comparison: Hormel workers averaged 35.8 hours a week, drew $29.78 in pay; packinghouse workers as a whole put in 39.3 hours, drew $27.11; workers in all industries averaged 37.7 hours, received $27.61.

For the company, the chart at the left speaks volumes. Further, Hormel expects to realize a saving of $160,000 through merit rating in 1941. Says President Hormel: "This is an attack on unemployment through employment. Thus solved logically, the national problem might disappear."

Spurred by "straight time," the Hormel credit union has largest membership in Minnesota, stands fourth in assets. Below, Clifford Nemitz makes a deposit. He owns his home



"You can't do this to me!" cried a Hormel employee, laid off in 1931. That set thoughtful President Jay C. Hormel (below) on the road to the annual wage, via a "preserve the job" plan

THE RASMUSSENS LIVE BY BUDGET

"It's the only thing for us and the best thing for the company," is Henry Rasmussen's comment on the annual wage. Here (left) he goes over the budget with Mrs. Rasmussen. For groceries, milk, and meat she gets $9 of the $31.08 he receives each week (though he worked only 1,654 hours last year), in the Hormel sweet pickle pumping department. The neat Rasmussen home has the best of modern conveniences.

On such a typical Austin street as this, the Rasmussens live in a larger home than any shown here. Many Hormelites start home-owning from scratch, live first in garages. But canny Mr. Rasmussen saved before his marriage, bought his house complete, and has his mortgage, on which he pays the credit union $6.35 weekly, well under control

A novel model display helps R. P. Crane, lumber dealer (left), to interest a lively new prospect in the future of Austin's realty

Harry M. Smith, Austin shoe dealer, is one of the many Main Street merchants who enthusiastically endorse "straight time" as a boon to business

HORMEL FAMILIES KNOW THEY CAN PAY

And Austin merchants know it, too. Much of the city's trade is in time-payment sales, of course. Hormel's employees buy freely but wisely; on the annual wage they can make budgets and live by them. Some store owners report that Hormel people, about 60 percent of the city's gainfully employed, make about 90 percent of the time-payment purchases.

Hormelites are A-1 credit risks, too. The proprietor of an electrical store in Austin states that his concern has had to repossess only 1.3 percent of the refrigerators it sells. Steady buying also means steady business and stabilized employment in the stores and offices. "Once in a while folks get loaded up and trade slacks off a bit," said one merchant, "but the Hormel bonus pulls 'em out." Here are Austin's total bank clearances since "straight time" took hold: 1935, $54,525,000; 1936, $61,619,000; 1937, $64,493,000; 1938, $61,663,000; 1939, $69,757,000.

Mr. and Mrs. Ray Nelson, he of the Hormel loading platform, have just bought themselves a handsome new Chrysler at the Austin Auto Company

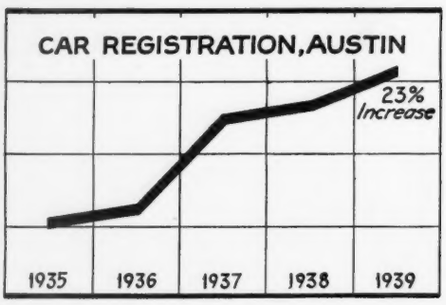
The newlywed Tommy O'Briens are shopping at Wolf's for a refrigerator, some furniture, and a suit. Tommy's bonus checks are going to help a lot

BILL MILLER SEES HIS BANKER

Having paid his mortgage on the dot from the start, Bill Miller (left) a Hormel ham worker, is hitting up N. F. Banfield, president of Austin's First National Bank, for a new loan. Bill keeps improving his little home, wants to put in a furnace now. He can carry his $5 payment easily on his $24.40 wage (the minimum for men) because he gets it every week. Says Mr. Banfield: "'Straight time' has done wonders for Austin."

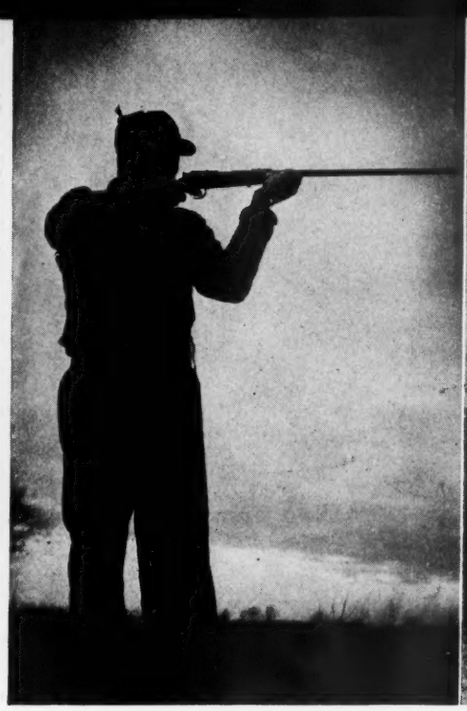
AUSTIN CAR REGISTRATIONS ARE ON THE INCREASE

Note rising Austin auto registrations (chart below) even in 1938. No wonder V. P. Zierke, Firestone service station manager, is another strong booster of the annual wage. Mower County, including Austin, had 123 cars per 100 families in 1935, 48 above the national average.



AUSTIN MERCHANTS REPORT BIG SALES GAINS

From the Piggly Wiggly (lower left) to Margaret's Beauté Shop (right), Austin's business people report steady trade, consistently increasing. Says Karl Linsteadt, theater manager: "Austin people budget for entertainment. Our receipts are steady. Among the 70 towns where we operate, there is none like Austin."



It's sure as shooting that Hollas Johnston of the abattoir force likes his "straight time" leisure

Lois Hawkins, the hard-hitting golfer shown above, gets her annual pay in the Hormel Flavor Sealed Division

Inez Oscarson (right) of the girls' "extra gang" likes to swim. She is shown here with Jean Odden

ALL AUSTIN GOES IN FOR SPORTS

In every picture on this page there is at least one Hormel factory employee. Hormel workers have plenty of leisure, but they earn it. To balance their short-hour weeks, there are long-hour weeks during the busy season.

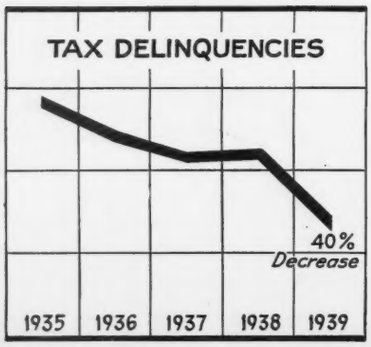
FACTORY's roaming photographer found Howard Anderson (immediately below) cruising on the Red Cedar River in the fast outboard speedster he built himself.

"I worked 12 hours this week," said Anderson, "but I got my full week's pay and had some fun." Said Frank Ihrke, beef cutter (left, bottom), "I probably wouldn't be out fishing today if it weren't for 'straight time'." (He got the fish.)

Thorwald Eckre of the shipping division is proud of his own plane. "It's a big investment," said he, "but I know I can swing it on yearly pay." Douglas Low of the men's "extra gang" is a member of the riding group at the extreme lower right.

Mower County Auditor C. M. Hubbard (above) reports steady drop-off in tax arrearages. In a nearby office you will find E. J. Welch of the State Employment Service who says: "Normally at this season we would have a flood of applications for jobs. But no more—not since Hormel went on straight time." Roy Franklin (right), executive of the CIO local, says straight time without a doubt has increased general employment and business in the entire community

WHAT ASSURED INCOMES HAVE MEANT TO AUSTIN



Bank clearances, an indication of prosperity, have risen in Austin from $54,525,000 in 1935 to $69,757,000 in 1939. Meanwhile tax delinquencies, as shown in the chart at the left, have declined from 3.74 percent in 1935 to 2.21 percent last year. In the same period, the circulation of the Austin Daily Herald has climbed from 5,000 to 7,000, another sure sign of the city's gains.

So much for facts and figures. Back of the statistics lies the *real* evidence in the bearing of the people themselves. Impressive is their confidence, independence, and good humor. Keen, indeed, is their understanding of industry and its importance to them. For here in this typical American town, management, labor, and the community have found a path to progress and prosperity in an altogether American way.